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Poster Presentations

Perinatal/Maternal-Fetal Medicine

P1.001
Comparison of outcomes of triplet pregnancy with twin pregnancy

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Objective: The purpose of this study was to compare perinatal outcomes and maternal complications of triplet pregnancies with twin pregnancies.
Methods: Medical records of triplet pregnancies delivered in Seoul Asan Medical center from 1992 to 2011 were reviewed for maternal and neonatal outcomes. And each triplet was matched for maternal age, parity and gestational age at delivery with twin in the same period. Pregnancies delivered before 24 weeks of gestation were excluded.
Results: During the 20-year period 38 triplet pregnancies were delivered after a gestational age of 24 weeks or more, and were matched with 38 twin pregnancies. Eighty-two percent of the triplets and 86% of the twins were a result of assisted reproduction. Neonatal birthweight (1663 vs. 1747 g), neonatal hospital stay (34 vs. 31 days) and the incidence of birthweight discordance (29% vs. 36%) were not statistically different in the two groups. Triplets had a significantly lower 1-min Apgar score than twins (51% vs. 34%, $P = 0.018$). But there were no significant differences between triplets and twins in the incidence of mechanical ventilator support, neonatal intensive care unit admissions, respiratory distress syndrome, apnea of prematurity, sepsis, intraventricular hemorrhage, patent ductus arteriosus, jaundice requiring phototherapy, retinopathy of prematurity, necrotizing enterocolitis and gastroesophageal reflux. Incidences of maternal complications were also similar.
Conclusions: The birthweight of triplets was slightly lower than twins, but there were no significant difference in neonatal morbidity and mortality when triplets matched for maternal age, parity and gestational age with twins. This outcome may be helpful to reassure women with triplet pregnancy who did not consider selective reduction to twins.

P1.002
A nationwide study: perception of obstetricians in Malaysia on induction of labour for patients with a single previous lower segment caesarean section

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Objective: To evaluate the perception of Obstetricians in Malaysia regarding induction of labour in patients with a single previous uncomplicated lower segment caesarean section.
Methods: This is a prospective study. A standardised proforma was posted to every single registered member of the Obstetrics and Gynaecology Society of Malaysians, which is the major organisation representing Obstetricians and Gynaecologists in Malaysia. The proforma evaluated a wide spectrum of perceptions of Obstetricians on current practice of labour induction in patients with a previous uncomplicated caesarean section. This included the timing, dosage, protocol, adherence to protocol and their personal perceptions. Furthermore, their perceptions on the safety of prostaglandins, its medico legal implications and the perceived best option of care were studied. The results were analysed using Microsoft Excel.
Results: The society has 620 registered obstetricians and 178 (28.7.4%) of them participated in this study. Sixty-two percent of the respondents were consultants in private practice, with 58% of them having more than 10 years of obstetrics experience. There were significant differences in terms of perception between public and private obstetricians. Eighty-four percent of the obstetricians in Malaysia were concerned regarding medico-legal implications of labour induction in a previously scarred uterus. Only 35.9% of the respondents had a protocol for induction of labour with two-thirds of them using half a 3 mg of prostaglandin E2 tablets. As for the best perceived care for labour induction in a previous scarred uterus, 52.4% would offer both options of induction and elective repeat caesarean section although 14% were uncertain regarding the medico-legal implications of this practice. Twenty-eight percent would offer an elective repeat caesarean section; 96% of them being consultants in the private practice with more then 20 years of experience. Interestingly, only 18% perceived that induction of labour via prostaglandin E2 was a safer option in comparison to a repeat caesarean section. Only 4% used membrane sweeping for labour induction.
Conclusions: There appears to be little consensus on how best to manage a patient with a previous untested caesarean scar. The majority of respondents were unhappy to utilise prostaglandins in these patients. Protocols are not widely standardised. As the medico-legal implications of inducing labour in such patients are significant, there is an urgent need for evidence based guidelines for the management of such patients. It is also important to monitor and audit such patients, which is best done by establishment of a national registry.

P1.003
Melioidosis in pregnancy: a case study

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Mdm F 37 years old housewife G3P2 at 32/52 presented with lower grade fever, jaundice and abdominal pain for the past 1/52. She denied any history of passing tea colour urine or pole stool. No bleeding tendencies and denied any high risk behaviour. Never took any traditional herbs. Examination revealed as vital signs

stable, afebrile and jaundice. Per rectal examination was normal. Abdomen soft, non tender and no organomegaly. Uterus corresponded to gestation and estimated birthweight (EBW) was 1.2–1.4 kg. Investigations results showed leucocytosis with neutrophil as predominat. Coagulation profile was normal. All liver enzymes were raised. Random blood sugar and renal function were normal. Infective screening were negative. Urine for urobilinogen were trace. U/S HBS revealed as Chronic cholycystitis. She was treated with IV Cefoperazone and IV Metrodinazole. After 2/7 she developed sepsis with DIVC. At this time IV Unasyn was started. Blood and urine culture were negative. Two cycle DIVC regime and two pint pack cell were transfused. However it still not corrected and she started to have bleeding tendencies and passing pale stool. Another two cycle of DIVC regime were transfused. Unfortunately the CTG showed fetal distress and EMLSCS was done. Intra-operatively the uterus looks yellowish and atonic. Uterotinic agents were administered and another cycle DIVC regime with blood were transfused. At ICU, her sepsis and DVIC were not subside and IV Tazosin was added. She developed acute renal failue. Another two cycle DIVC regime were given. CT scan of brain was normal. CT HBS showed normal finding. Repeated u/s HBS showed similar finding with the first u/s. No evidence of dilated CBD. At this time, our diagnosis were Chr Cholycystitis with acute liver and renal failure. She was planned for ERCP later by surgical team. After 5/7 in ICU the fever settling and she was transfered to antenatal ward. The IV antibiotic were continued for 2 weeks and she was afebrile. RFT became normal. Even though the liver enzyme and bilirubin levels were reducing, the jaundice still persisted. She requested AOR discharge on D15 of EMLSCS because wanted to seek for traditional medicine. 2/52 later, the bacteriological result came back as IgM positive for Melioidosis. We called her back, however she refused any treatment. In conclusion, Melioidosis which affected the gall bladder is very rare. Mortality is very high and treament is problematic.

P1.004
Parameters trefoils called factors in pregnant women

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Background: Trefoil family in humans consists of three peptides (TFF-1, -2, -3) which play a role mainly in the repair process of mucosal epithelium in the gastrointestinal tract (GIT), but also in the urothelial tract and elsewhere. TFFs is a specific function in copper binding and are characterised by expression in the GIT, pancreas, cartilage, lungs, urinary tract or placenta. TFF expression increases before partum and decreases after. Yet been tested in pregnant protein concentration.
Objective: To determine the concentration of TFF1 and TFF2 in pregnant women during pregnancy, TFF determinate the relationship with the occurrence of aneuploidy.
Methods: We tested 56 pregnant women (after informed consent to testing), who gave birth to healthy children, 12 pregnant women with suspected aneuploidy. For all pronbands excluding women with aneuploidy was examined during the 1st, 2nd, 3rd Trimester hCG, AFP, E3, hCG-beta and PAPP-A (MOM) and performed repeated ultrasound examination. There was developed sandwich ELISA own method for determining TFF1/2 with satisfactory analytical characteristics.
Results: The concentration of TFF1 gene product during pregnancy did not change (median 0.4, 0.5, 0.5, $P = 0.56$), TFF2 significantly increased (median 3.1, 4, 13, $P < 0.01$). Concentration TFFs unrelated occurrence of aneuploidies.
Conclusion: This was the first time the concentration of TFF1 and TFF2 was measured in pregnant women during pregnancy in the peripheral blood, where it was found that TFF2 during pregnancy significantly increases and can assume its role during pregnancy. Relation between the incidence of chromosomal aberrations and TFFs have been demonstrated.

P1.005
Cannaboid hyperemesis syndrome in pregnancy

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Objective: Cannabis is the most commonly used illicit drug in the western world. Since 2004 a number of papers have been published describing a cannabinoid hyperemesis syndrome; a pattern of symptoms consisting of recurrent nausea and vomiting, and abdominal pain, in association with chronic heavy cannabis use. Compulsive bathing is a behaviour characteristically seen amongst those suffering from this condition, hot water providing relief of symptoms. The aim of this case report is to increase awareness among obstetricians of this uncommon disorder, which may occur in pregnancy and be mistaken for other hyperemetic conditions of pregnancy.
Methods: A case report describing a 19 year old primigravida who was admitted under our care several times during her pregnancy suffering from cannabinoid hyperemesis syndrome.
Conclusion: The rising prevalence of cannabis use in the general population may mean that cases of cannabinoid hyerpemesis syndrome in pregnancy become more frequent in the future. The condition could easily be confused with idiopathic hyperemesis of pregnancy; this case illustrates the diagnostic and management issues that can arise if it is overlooked.

P1.006
Perinatal switch in twin order between the last prenatal ultrasound and birth

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Background: It is often assumed by obstetricians, neonatologists and parents alike that the prenatal nomenclature used to identify twins on ultrasound is equally applicable after their delivery. The aim of this study is to use a large regional twin ultrasound database to validate the effectiveness of a scan just prior to birth in predicting twin birth order.

Methods: The twin ultrasound database from the Southwest Thames Obstetric Research Collaborative (STORK) was used to identify all examination carried out within 4 weeks of birth. The likelihood of a perinatal switch was evaluated by matching discrepancies in ultrasound estimated fetal weight (EFW) with birthweight discordance. The twin perinatal switch rate estimated from twin sizes was confirmed by comparing pre and post-natal order in discordant sex twins.
Results: Two thousand one hundred and three twin pairs with ultrasound EFW and birthweights were assessed. The anticipated birth order according to the ultrasound scan changed in 753 (35.8%) twin deliveries. The perinatal switch in discordant sex twins 66/156 (42.3%) was not significantly different ($P = 0.12$).
Conclusion: Approximately one third of twin pregnancies switch order between the last scan assessment and delivery whether determined by size or sex discordance. The high likelihood for a perinatal switch should be borne in mind not only by parents, but by physicians when delivering twins discordant for anomalies that are not evident on external examination.

P1.007
Abnormal uterine artery velocimetry at midgestation and adverse pregnancy outcome

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Objective: To determine the relationship between abnormal uterine artery velocimetry at midgestation and adverse pregnancy outcome in low risk primigravidae.
Methods: A cross-sectional comparative study was conducted at MCH Center, PIMS from February, 2009 to March, and 2010. Uterine artery Doppler ultrasound was done in 172 low risk nulliparous women presenting at 20–24 weeks of gestation. The study population was followed for adverse outcomes such as pre-eclampsia, placental abruption, delivery before 34 weeks, fetal demise and small for gestational age baby. Pregnancy outcomes were compared between women with and without abnormal uterine artery Doppler. Chi Square test was used to determine the significance of association between abnormal uterine Doppler and adverse pregnancy outcome.
Results: Of the 172 women, 32 (18.6%) had an abnormal uterine artery velocimetry. Among 32 women with an abnormal Doppler ultrasound, 20 (62.5%) had adverse pregnancy outcome compared to 25 (17.8%) in those with normal Doppler (P value < 0.05). The incidence of pre-eclampsia as well as placental abruption was higher in women with abnormal Doppler [8 (25%) vs. 5 (3.5%); $P = 0.000$ and 2 (1.4%) vs. 1 (3.1%), respectively]. The incidence of LBW was also higher in abnormal Doppler group [13 (40.6%) vs. 17 (12%), $P = 0.000$]. There was no significant difference in the incidence of intrauterine fetal demise after 24 weeks, and preterm delivery.
Conclusion: An abnormal uterine artery velocimetry at midgestation is significantly associated with adverse pregnancy outcome.

P1.008
Yophytta pregnancy gymnastics reduces anxiety level toward childbirth moment in primigravida at Kendangsari Woman And Children Hospital – Surabaya

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Objective: This study analysed the influence of Yophytta (Yoga, Phylates, Hypnobreathing and Thaichi) pregnancy gymnastics on anxiety level toward childbirth moment of primigravida at Kendangsari Woman and Children Hospital, Surabaya.
Methods: This study used pre-experimental with pre-post test design. Population was all pregnant mothers at Kendangsari Woman and Children Hospital, Surabaya, at 28–34 weeks of gestation, comprising 12 respondents meeting the inclusion criteria. Samples were drawn by using Quota Sampling technique. Instruments used were Depression Anxiety Stress Scales (DASS) and pre- and post-intervention cortisol examination results. Data were analysed with Wilcoxon's statistical test and dependent t-test.
Results: The study showed that before practicing pregnancy gymnastics, most of the respondents experienced mild anxiety, in which 0% were normal, 58.33% had mild stress, 25% moderate stress, 16.67% had severe stress and 0% panic. After practicinggymnastics, most of them did not experience any anxiety, in which 75% were normal, 25% mild, 0% moderate, 0% severe, and 0% panic. This indicated significant difference with $P = 0.001$ ($P < 0.05$). The mean of pre-gymnastic cortisol level was 22.55 (SD = 5.226) and that of post-gymnastic was 18.79 (SD = 3.898). This indicates significant difference $P = 0.006$ ($P < 0.005$). Therefore, pregnancy gymnastic Yophytta has influence on anxiety and cortisol levels toward childbirth moment.
Conclusion: The Yophytta pregnancy gymnastic is effective to alleviate anxiety level toward childbirth moment. For pregnant women, especially those who are in 3rd trimester, they should practice pregnancy gymnastics regularly, so that their condition can be cared for and they become relaxed.

P1.009
Gitelman's syndrome in pregnancy: a case report

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A 23 year old gravida 2 para 1 at 12 weeks of gestation was admitted at the coronary care unit due to severe chest pain. She was found to have hypokalaemia and was managed with intravenous potassium. She had a similar episode in previous pregnancy was attributed to poor diet and recurrent urinary tract infections. She was managed with oral potassium and magnesium supplements and long term antibiotics in the first pregnancy. Her symptoms worsened in current pregnancy. Her booking serum potassium was 3.2 IU/L. Urinary potassium was high and there was also hypocalciuria and secondary hyperaldosteronism.

The thyroid function test was normal. Genetic testing at 24 weeks of gestation revealed a single mutation at the SLC12A3 gene hence the diagnosis of heterozygous Gitelman's syndrome was made. She was managed throughout pregnancy with oral potassium, magnesium and amiloride with occasional admissions for intravenous potassium. She had multi-disciplinary care with the physicians-nephrologist and endocrinologist. A serial growth ultrasound scan showed normal fetal growth and liquor volume. She was induced at 37 weeks of gestation due to persistently low potassium and had uneventful vaginal delivery of a healthy baby. She was followed up in the postnatal period and was commenced on Microgynon for contraception 3 months post delivery. This was later discontinued on the advice of the endocrinologist as it exacerbated the low levels of salts caused by Gitleman's syndrome.
Discussion: Pregnancy is capable of worsening the salt-losing features of Gitelman's syndrome. This explained the exacerbation of symptoms noticed in this patient during pregnancy and use of combined oral contraceptive.
Gitelman's syndrome is managed with potassium and magnesium supplements, potassium sparing diuretics like Spironolactone and Amiloride. Maternal weight gain is a good clinical indicator of adequate fluid and electrolyte balance. Growth USS is essential as five of 12 reported cases were found to be associated with oligohydramnios. Over 100 mutations are scattered through the SLC12A3 gene and 18–40% of patients carry only a single mutation instead of compound heterozygous or homozygous. Our patient with a single gene mutation was symptomatic. Possible explanation may be due to limitation of current genetic testing.
Conclusion: The diagnosis and appropriate management of this rare syndrome in pregnancy is essential since pregnancy may worsen the condition. Despite exacerbation in pregnancy, maternal and fetal outcomes remain favourable with treatment aimed at relieving worsening maternal symptoms. Fetal and amniotic fluid surveillance.

P1.010
Dandy-Walker malformation and the genetic link: our UAE experience

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Objective: Dandy–Walker Syndrome (DWS) is a rare congenital malformation that involves the cerebellum and fourth ventricle. Of the three types of DWS the incidence ofDWS malformation (DWM) has been published at 1 per 25 000–35 000 live births. The incidence of the minor varieties of the complex is not known. The aim of the study was to determine the incidence of this condition and the associations with genetic disorders in the United Arab Emirates (UAE) .
Methods: This was an observational study over 20 months (April 2010–November 2011) in which pregnancies affected by DWS were followed up in the Fetal Medicine Unit, Corniche Hospital. Data was analysed from maternal and neonatal records, as well as the ultrasound scan reports. The short term outcomes were reviewed.
Results: Forty-one women were seen with DWS of which 18 women were excluded (pregnancies that ended with no live births or on-going pregnancies). Of the remaining 23 cases, six babies had enlarged cisterna magna (ECM), 10 had DWS variant (DWV) and seven had DWS malformation (DWM), making the incidence of DWS in our population 16.2 per 10 000 live births per year, and DWM 4.9 per 10 000 live births per year. The incidence of DWM is approximately 16 times higher than those quoted by other studies. Only five babies were neurologically intact at follow-up which ranged from 2 months to 18 months, four of which had ECM and 1 had DWV. Consanguinity rates were higher in parents of DWV and DWM, 40% and 43% respectively. All babies with DWM were in the Arab population and were associated with genetic disorders, including Aicardi syndrome, Goldston syndrome, Hemifacial microsomia and Cranio-cerebello-cardiac syndrome.
Conclusion: We present the incidence of DWM in the UAE which is astoundingly high. This could beexplained by the high incidence of genetic disorders associated not only with consanguinity but also tribal marriages in the population that result in unique genetic make-up. Further research and review of the genetic profile and associations in the long-term outcome is underway.

P1.011
Does pathological CTG related to abnormal cord blood pH?

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Objective: To find out the correlation between pathological CTG and abnormal umbilical cord blood pH.
Methods: A prospective study was done. One hundred singleton normal pregnancies delivered by caesarean section were chosen. The intrapartum CTG was performed 1–4 h before time of delivery. The umbilical cord blood was taken immediately after delivery of the baby.
Results: From 100 samples, 73 had type II deceleration. Out of the 73, 45 had normal blood pH and 28 abnormal. Another six CTG showed fetal bradycardia and all blood pH were acidotic. And from the last 21 CTG which showed deep type I or variable deceleration, 19 had normal blood pH w only two abnormal.
Conclusion: The study shows that pathological CTG does not completely correlate with abnormal umbilical cord blood pH.

P1.012
Spontaneous rupture of spleen during pregnancy: case report

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A 26-year-old primigravida with known Factor V Leiden deficiency and recurrent DVT, presented at 32 weeks of gestation with acute onset of upper abdominal pain and shortness of breath. There was no history of abdominal trauma. On

examination she was haemodynamically stable, abdominal examination revealed epigastric tenderness but the uterus was soft and not tender, SFH was 32 cm, Chest examination was unremarkable and speculum examination revealed closed cervix. Investigations including FBC, U&Es, LFT, ABG, ECG and CXR were within normal limits. The cardiotocograph (CTG) showed unprovoked decelerations. In view of worsening abdominal pain and abnormal CTG, an emergency caesarean section with abdominal exploration was performed. Haemoperitoneum was noted, a viable female infant was delivered and active bleeding from the spleen was noted. Splenectomy was performed. The woman had an uncomplicated postoperative course. Histopathoglogical examination revealed a normal spleen. Spontaneous rupture of spleen in pregnancy is a rare and potentially catastrophic event with only 28 case reports published between 1953 and 2010. Maternal mortality is as high as 70%. Early diagnosis, a multidisciplinary team approach and timely surgical intervention will optimise maternal and perinatal outcome.

P1.013
Perinatal outcome for fetuses with the arachnoid cyst identified prenatally

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Objective: The aim of this study was to evaluate the perinatal outcome of an isolated arachnoid cyst.
Methods: We retrospectively analysed the medical records of all fetuses and infants with an isolated arachnoid cyst. Arachnoid cyst was defined as well-capsulated homogenous hypoechoic cyst in cisterns by prenatal ultrasound. Fetuses with associated anomalies were excluded in this study. Serial follow-up imaging study after birth was analysed and perinatal outcome was assessed through results from neurologic signs, duration of ICU and occurance of respiratory distress.
Results: Among the 38 fetuses who diagnosed with arachnoid cyst by prenatal ultrasonography, 11 were lost to follow up. Of the 27 infants who were performed the postnatal ultrasonography, 16 confirmed the diagnosis of arachnoid cyst. The diagnosis of accuracy was 59.3% (16/27). The median gestational age at diagnosis was 33.1 weeks of gestation (range, 22.6–37.3 weeks) and median size of mass was 28.5 mm (range, 12–46 mm). The cysts were located on supratentorium in eight cases (50%), and another half of the cysts were located on infratentorium. The median gestational age at delivery was 38.1 weeks of gestation (range, 37.4–40.4 weeks). Among the 16 infants who were diagnosed with arachnoid cyst postnatally, six admitted to NICU and median duration of hospitalization is 11.6 days (range, 10–48 days). It was not necessary to need ventilator support for six infants, but they were admitted immediately for management of surgery. Four infants were combined with ventriculomegaly, one of them had the neurologic sequelae. Cyst fenestrations were performed in eight infants. The indications of operation were increasing in size, newly developed hydrocephalus or the presence of neurologic signs. All infants are growing up normally without neurologic deficits regardless of having surgery, and size and location of cysts.
Conclusion: The prognosis of an isolated arachnoid cyst is excellent. Prenatal ultrasonographic findings helps to counsel the parents, and optimize the neonatal management.

P1.014
Hypokalemic paralysis: an increase in incidence among indigenous pregnant women in a rural district in Sarawak

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Objective: To highlight the surprisingly high incidence of this condition among the indigenous pregnant women from the Rejang basin of Sarawak and ignite interest in further research on this peculiar discovery.
Methods: A retrospective cohort study was carried out for an 18 month duration (1st May 2010–1st November 2011), in the district Hospital of Kapit, Sarawak. Patients were identified based on the case registry and relevant data were extracted systematically using a standardised proforma. Other common causes of paralysis had been excluded.
Results: A total of nine patients presented with sudden onset of paralysis in pregnancy and significant hypokalemia. None had antecedent medical illnesses. Average potassium level was 2.2 mmol/L. Interestingly, the majority of these women were <20 years of age, presented in the third trimester and proximal lower limb myopathy was the predominant symptom. One patient had a similar episode in her previous pregnancy. The calculated incidence is 6:1000 deliveries. This is significantly higher than any reported case series among pregnant women to date. All but one of the patients was of ethnic Iban descent. There were no identified familial trait of inheritance but it was difficult to quantify dietary consumptions, especially in relation to caffeine and clay intake. Where creatine kinase levels were available, it was significantly raised to reflect hypokalemic rhabdomyolysis. Symptoms resolved with potassium correction and none of the patients with rhabdomyolysis developed myoglobinuria or renal failure. Of particular note, there were no recurrent symptoms in the course of the pregnancies with good maternal and fetal outcomes.
Conclusion: Although the exact prevalence is unknown, hypokalemic paralysis is estimated to affect 1:100 000 people, occuring more often in men than women. The population of Kapit division is about 130 000, with about 900 deliveries per year giving an incidence of hypokalaemic paralysis of 6 per 1000 deliveries during the period of study. The reported incidence of hypokalaemic paralysis in this rural region is much higher among the indigenous population. Dietary habits, familial or genetic predisposition cannot be ruled out. Despite favourable outcomes, it may be associated with rare but serious maternal consequences. It warrants further detailed study into the possible aetiologies and to help understand the progression of the condition, in order to better plan subsequent management. This is imperative as Kapit is a remote region with a predominantly indigenous population living far from healthcare facilities.

P1.015

Shortcomings in RCOG guidance: specialist registrar and medical student perspective. Reduced Fetal Movements (Green-top 57)

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Objective: To identify missing clinical advice from RCOG Reduced Fetal Movements guideline (Green-top 57) in order to evaluate the over all practicality.
Methods: A detailed evaluation of the guideline was performed to search for missing information relevant to reduced fetal movements.
Results: The evaluation revealed: No concise definition for reduced fetal movements. No guidance for reduced fetal movements or recurrent reduced fetal movements in multiple pregnancies. For pregnancy below 28 weeks of gestation there is no guidance on recurrent reduced fetal movements. No advice for pregnant women with active fetal movements on ultrasound scanning, that she is not perceiving.
Conclusion: Excluding multiple pregnancies from the guideline makes it irrelevant for around 1.5% of the pregnant population in the UK. Furthermore multiple pregnancies are high risk and guidance on reduced fetal movements would be entirely essential in this group. As there is no clarity regarding the classification of reduced fetal movements, there is difficulty discerning pregnant women with true reduced movements from a false perception. If ultrasound scanning detects active fetal movements that mothers do not sense, could we reassure them? How would we continue to monitor fetal wellbeing? Further research based on this issue would target a significant proportion of women presenting to maternity units. As mentioned in the guideline, placental insufficiency can occur prior to 28 weeks of gestation. For this minority of high-risk patients we adopt an individual plan of care, without any national guidance.
Overall this guideline provides basic information on management of reduced fetal movements, however it lacks detail. This makes it impossible to apply to complex cases. This stems from the lack of evidence base. For example, it is suggested that biophysical profile may be useful as a negative predictor of outcome in high-risk cases, however it does not overtly recommend its use due to low quality RCTs against its use in predicting fetal wellbeing. Further research needs to be geared towards the above problems so reduced fetal movements guidance can be streamlined into concise advice and hence potentially have impact upon neonatal morbidity and mortality.

P1.016

Correlation between cord blood gasses and fetal outcome

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Objective: To study the correlation between cord blood gasses (cord pH) and fetal outcome (Apgar's score).
Methods: This is a retrospective study of 100 patients to look at the correlation between cord pH and Apgar's score of live born babies. Data were taken from elective or emergency caesarean sections (i.e. acute fetal distress, fetal bradycardia, failed induction and failure to progress) Apgar's of these babies were taken at 1 and 5 mins.
Results: The study shows 70% of babies with poor Apgar's score had abnormal cord blood pH (acidotic). The remaining 30% shows no difference. There is also no difference in results in babies delivered via Caesarian sections (emergency or elective) with good Apgar's score.
Conclusions: Apgar's score is strongly related with cord blood pH. However, there is no difference in results between babies delivered with good outcome via caesarean sections as emergency or elective.

P1.017

Preparation for an intrapartum challenge: vaginal delivery versus caesarean section in a patient with rhabdomyolysis

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Objective: A challenge to ensure a healthy mother, baby and improve the future obstetric outcome of a woman with recurrent rhabdomyolysis of unknown cause is discussed. Idiopathic rhabdomyolysis may cause acute renal failure due to by products of myoglobin metabolism. Labour, pain and anxiety increase muscle activity, resulting in rhabdomyolysis in a susceptible patient. To present a detailed medical and obstetric management plan agreed by a multidisciplinary team for both spontaneous and induced labour and delivery of a woman with pre-existing recurrent intermittent rhabdomyolysis of unknown origin.
Methods: A 29 year old Asian primigravida had had two episodes of acute renal failure, with one admission to hospital caused by rhabdomyolysis secondary to moderate exercise and dehydration. She had recently moved to England. No diagnosis by muscle biopsy was available. Mode of delivery was considered with the aim for a safe delivery with consideration to future pregnancies and deliveries. A multidisciplinary team produced a management plan for monitoring and management in labour either spontaneous or induced onset. Good communication between medical teams and laboratories was arranged. Patient education and cooperation was mandatory. A plan of management to reduce anxiety, pain, dehydration, delay in labour and exertion for 2nd stage was made. In labour and postnatal, a documented management plan for 4 hourly electrolytes and creatinine kinase monitoring, reduction in production of myoglobin metabolites by sodium bicarbonate and normal saline infusion and criteria for levels that indicated active rhabdomyolysis and impending renal compromise where change of obstetric management needed to occur urgently.
Results: Progress through spontaneous labour with augmentation by oxytocin at 39 weeks of gestation, eventually resulting in caesarean section, with a creatinine kinase of 215 U/L, is discussed. Regime of blood monitoring and intravenous fluids is

detailed. Postnatal management of her rhabdomyolysis is presented.
Conclusions: Multidisciplinary management at a senior level with education and good communication is paramount to a safe outcome. Good communication, education and understanding with the patient are also vital. Well documented, concise management guidelines are also important. Review of literature identifies limited data on muscle metabolism following spontaneous labour and caesarean section. The creatinine kinase results are discussed. Careful preparation prior to delivery resulted in a safe and positive experience for the parents.

P1.018
Pregnancy outcome in women with pre-gestational diabetes mellitus at a district general hospital

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Objective: The observed prevalence of pre-gestational diabetes mellitus (PGDM) is increasing globally. Women with PGDM have a higher risk of adverse pregnancy outcome. More such pregnancies occur in non-Caucasian population and intervention rate is high. The aim of this study was to audit the pregnancy outcome in women with PGDM delivering at a public district general hospital serving a large immigrant population.
Methods: Retrospective casenote analysis of women with PGDM delivering at Logan Hospital, Australia over 12 months between 1st May 2010 and 30th April 2011.
Result: Twenty-three women with PGDM (0.63% prevalence) with a mean age of 31.5 years (range 21–40) delivered during this time. Two had type 1 and 21 had type 2 disease. Five women were pregnant for the first time. Fifteen (65%) were non-Caucasians born overseas and two were indigenous Australians. The average BMI was 33.4 (range 1945) and parity 2.3 (range 010). Seven women were on insulin, 12 on Metformin and four were not on medication before getting pregnant. Target HbA1c (6.1%) was achieved pre-conceptionally in 9 (39%). Nineteen women (82.6%) required insulin during pregnancy. Metformin in isolation or combination was used in nine (39%). Satisfactory antepartum glycaemic control (HbA1c <7.1% in each trimester) was achieved in none. Nine (39%) women had retinal assessment antenatally. Fetal macrosomia (8) and polyhydramnios (4) were the commonest fetal complications suspected on serial ultrasound. The mean gestation at delivery was 37 weeks (range 32–40). Three laboured spontaneously, labour was induced in 14 (60.8%) and six had elective delivery. Ten (43%) women had vaginal deliveries. Nine (39%) had emergency and four had elective Caesarean section. There were 22 live births and 1 stillbirth. The average fetal birthweight was 3704 g with five macrocosmic (>4.5 kg) babies and one severe shoulder dystocia. Thirteen (56%) neonates required admission to the neonatal special care for hypoglycaemia (7), jaundice (4), sepsis (4) and respiratory problems (4). Breastfeeding was achieved in all 22 live babies when discharged.
Conclusion: Local prevalence of PGDM is higher than presumed (0.37%) and more prevalent in non-Caucasian population. There is considerable room for improvement in the antepartum glycaemic control. Attendance, compliance, cultural and language barriers are important issues. Despite this, the rate of vaginal delivery is higher than the national average (37%). Breastfeeding rates were excellent.

P1.019
Caesaren section rates in public and private patients

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Background: In Ireland's unusual model of maternity care, free universal care is offered to all women as public patients, but a large proportion of patients choose to pay for private care. Internationally, private medical insurance is associated with higher caesarean section (CS) rates; physician behaviour has been cited as a possible cause of rising rates.
Objective: The purpose of this paper is to report the CS rate for private and public patients and to document which clinical groups account for any difference.
Methods: Computerised CS data for patients delivered in 2009 were analysed using the Robson ten-group classification.
Results: Nine hundred and two of the 3884 (23.2%) public patients had a CS, compared 482 of 1432 (33.7%) private patients ($P < 0.001$). In women aged more than 35, the rates were 249 out of 851 (29.3%) and 257 out of 672 (38.3%) respectively ($P < 0.001$); in women aged <30, the respective rates were 369 out of 1901 (19.4%) and 41 out of 158 (25.9%) (NS). In round figures, the 10% difference in the overall rate for the two groups was composed of 2% resulting from differences in nulliparous patients, 7% resulting from differences in the number of repeat operations and 1% resulting from multiple pregnancies.
Conclusions: The study shows more liberal use of CS in nulliparous women who are private patients. This is not explained by more advanced maternal age alone. It has a downstream effect of more repeat caesareans in subsequent pregnancies.

P1.020
Ogilvie syndrome – an acute pseudo-colonic obstruction 1 week following caesarean section: a case report

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Introduction: Ogilvie syndrome or acute pseudo-obstruction of the colon is a rare condition characterised by progressive dilatation of the proximal colon in the absence of any mechanical obstruction. The condition mainly affects the caecum and right colon. It is more common in the elderly and those with systemic illnesses. In 50–60% of cases the preceding cause is trauma or surgical procedure, most commonly caesarean section. We report a rare case of Ogilvie syndrome 1 week following an emergency caesarean section.
Case Report: A healthy 36 year-old primigravida with an uneventful antenatal period presented in spontaneous labour at term. She had an emergency lower segment caesarean section for

fetal distress at full cervical dilatation. The operation was uneventful and the baby was delivered in good condition. She subsequently developed an *E. coli* septicaemia and bilateral hydronephrosis post-operatively. One week following her caesarean section, she had an exploratory laparotomy due to suspected bowel obstruction. Laparotomy finding was unremarkable and no evidence of bowel obstruction was noted. A diagnosis of Ogilvie syndrome was made. She was managed conservatively and spent 3 weeks in the hospital before she was discharged.

Discussion: Ogilvie syndrome was first described in 1948 by Sir William Ogilvie, an English surgeon who reported patients with abdominal pain, vomiting, constipation, and colonic distension due to destruction of the nerve plexus by a retroperitoneal malignancy. Ogilvie hypothesized that the aetiology of their conditions was due to an imbalance in the autonomic nervous system with sympathetic deprivation to the colon, leading to unopposed parasympathetic tone and regional contraction, resulting in functional obstruction. Treatment is mainly conservative, however, the colon may become massively dilated and if not decompressed, the patient is at risks of perforation, peritonitis and death. Our patient had two risks factor of developing Ogilvie syndrome, which were recent surgery and systemic illness with *E. coli* septicaemia. The decision for doing laparotomy in this case was made by the surgical team and the main benefit was to rule out intestinal obstruction. One can argue that given the risk factors present above, conservative management alone would probably be more appropriate rather than laparotomy. She was subsequently managed conservatively and achieved a good outcome. The diagnosis of Ogilvie syndrome following caesarean section is difficult and still faces a big challenge. This case report highlights the importance for a greater awareness amongst obstetricians to consider Ogilvie syndrome as a differential diagnosis

P1.021
Torsion of a full term gravid uterus

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Torsion of full term gravid uterus is a rare but potentially serious obstetric problem. Although the exact etiology is not known, many abnormalities have been associated with torsion like fetal mal-presentations, uterine fibroids and malformations. The diagnosis is difficult as the symptoms are nonspecific and may mimic other pathologies like abruption. The usual symptoms of uterine torsion are pain abdomen, vaginal bleeding, shock, urinary and intestinal symptoms. We report the successful management of a case of acute uterine torsion in a woman planned for elective caesarean section for unstable lie. A 40 year old gravida 5 para 2 at 38 weeks of gestation, gestational diabetic on metformin was booked for elective caesarean section for unstable lie. Patient was given spinal anesthesia in sitting position. After spinal, when she was positioned supine for caesarean section, the patient complained of acute onset of breathlessness and dizziness. Blood pressure was unrecordable. Lateral tilt was given as supine hypotension was suspected. She remained symptomatic with hypotension and bradycardia in spite of intravenous atropine. We decided to expedite the delivery of the baby. On entering the peritoneal cavity, the uterus was congested and bluish with engorged and tortuous blood vessels in the lower segment. Anatomy of the organs felt distorted. On further exploration inside the peritoneal cavity, torsion of uterus in a clockwise direction to almost 180° was noted with the posterior wall of uterus facing anteriorly. Immediate attempt was made to slowly detort the uterus which was successful. Patient immediately became symptomatically better and the uterine congestion resolved. Routine lower segment caesarean section was performed resulting in a healthy baby boy weighing 3.6 kg with good apgar and cord pH. Placenta showed signs of early separation. Post-operative period was uneventful. High index of suspicion and detorsion of the uterus avoided the inadvertent incision in the congested posterior uterine wall which could have resulted in massive postpartum haemorrhage. Timely recognition and prompt treatment is required in cases of uterine torsion to avoid adverse maternal and fetal outcomes.

P1.022
User training for Bakri postpartum balloon in first-referral level hospitals in Malaysia – Sabah experience

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Objective: This presentation illustrates the importance of continuous teaching and training among healthcare providers in First-Referral Hospitals, in the use of uterine balloon tamponade in controlling postpartum hemorrhage (PPH).

Methods: Even though there has been a gradual decline in the overall incidence of PPH contributing to maternal deaths in Malaysia (15.8% of maternal deaths in 2001–2005), PPH is still the major contributor of maternal deaths in Sabah (42.3% in 2010), the second largest state in Malaysia with huge rural population. Use of uterine balloon tamponade was first introduced in Sabah Women's and Children's Hospital (SWACH) after two consultants from the Obstetric and Gyneacology Department attended the first Obstetric Life Saving Skills Course (OLSSC) organised by the Royal College of Obstetrics and Gynaecology (RCOG) and the Obstetrical and Gynaecological Society of Malaysia (OGSM) in June 2008, during which the technique was taught. Due to cost consideration, Rusch Hydrostatic Balloon was initially used in SWACH later that same year. As the department gained confidence in uterine balloon tamponade, we switched to Bakri Postpartum Balloon in April 2011. With encouraging results, the decision was made to introduce its use in all 21 first-referral level hospitals in the state, aiming to temporise and stabilise patients, before transferring to tertiary hospitals. Training was recognised as essential and a training workshop in SWACH was first held on 18 April 2011. This was followed by six Obstetric Life Saving Skills Courses since June 2011 conducted by SWACH. A further four Bakri Balloon User Training Workshops, consisted of lecture and hands-on sessions, were organized in various first-referral hospitals state-

wide. This was to coincide with provision of Bakri postpartum balloons to all the hospitals by Sabah State Health Department in October 2011. By December 2011, all first-referral hospitals in Sabah had at least one doctor and one nurse, if not more, trained in the use of Bakri postpartum balloon.
Results: Postpartum hysterectomy rate in SWACH among massive PPH patients (defined as blood loss of 1.5 L or more) had reduced from 24.4% in 2010 to 13.6% in 2011. There was successful use of uterine balloon tamponade by medical officers in three first-referral hospitals within 2 months of training.
Conclusions: Uterine balloon tamponade is an easy and effective technique that can be applied by healthcare providers including nurses in controlling PPH. Provision of Bakri balloon and continuous effort in teaching and training has shown to improve PPH management.

P1.023
Umbilical artery pulsatility index and different reference ranges: does it really matter?

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Objective: Umbilical artery (UA) Doppler pulsatility index (PI) is one of the most used Doppler parameters to distinguishing between a constitutionally small fetus from one that is growth restricted due to placental insufficiency. Many published reference ranges for UA PI are available. The aim of this study is to compare different values of an increased UA PI ≥ 95th percentile from various references and to review its potential impact on obstetric management.
Methods: A search for publications of UA PI reference ranges was made. All 95th percentile UA PI values by gestation from the selected references were obtained and plotted against one another.
Results: Five commonly used UA PI reference ranges were reviewed: Parro Cordero et al., Harrington et al., Arduni et al, Acharya et al. and Merz et al. At 28 weeks of gestation, Parra Cordero et al demonstrates a difference of +0.1 and +0.21 to Harrington and Arduni; and a −0.1 difference to the others. At 32 weeks of gestation the PI value of Parra Cordero et al. is comparable with Acharya and Merz, however there is at least a +0.25 difference in Harrington and Arduni et al. When a pregnancy reaches 37 weeks of gestation, the PI values between Parra Cordero, Acharya and Merz et al. are remarkably similar (1.10, 1.14 and 1.16) while the PI in the others are much higher as 1.40. This pattern continues at full term when Parra Cordero, Acharya and Merz et al reported a PI of 1.00, 1.09 and 1.09 while Harrington and Arduni et al. reported 1.40.
Conclusion: We highlight an important variation in the UA PI values ≥95th percentile between different references published. These differences are potentially significant when applied to clinical practice, as an UA PI that has a lower 95th percentile value could mean more fetal surveillance, more steroid therapy and possible consideration of preterm delivery. Similarly at 37 weeks of gestation, a lower 95th percentile value may lead to increased induction of labour. There is currently no evidence in choosing a particularly reference range over the other. A study comparing the clinical management, pregnancy and neonatal outcomes using different UA PI reference ranges is in progress and will hopefully better answer this question.

P1.024
Is there an increased risk of meconium after external cephalic version?

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Objective: Vaginal delivery is associated with increased early neonatal morbidity and mortality compared with elective caesarean section for breech presentation at term. External cephalic version (ECV) is advocated in breech presentation at term to facilitate safe vaginal delivery. ECV is accepted as generally safe although the immediate emergency caesarean section rate is thought to be around 0.5%. We conducted a study to compare complication rates following unsuccessful and successful ECVs.
Methods: A retrospective cohort study was conducted in a large London district general hospital. All ECVs in pregnancies delivering between 1 January 2006 and 31 December 2011 were analysed. The data was extracted from Ciconia Maternity Information System (CMiS) and entered into Microsoft Excel for statistical analysis. Further statistical analysis was calculated using simple interactive statistical analysis.
Results: One hundred and forty ECVs were performed in the 6 year period. Of the 140 ECVs performed, 37 were successful giving an overall success rate of 26.4%. There were no significant differences between unsuccessful and successful ECVs in blood loss at delivery (555 ± 283, 474 ± 535 mL) and Apgar scores at 1 and 5 min. However, women who have an unsuccessful ECV tend to deliver earlier (39.1 ± 1.0, 40.2 ± 1.0 weeks gestation; $P < 0.001$), have less meconium at delivery (4 ± 20%, 30 ± 46%; $P < 0.001$), and have an infant that weighs less (3224 ± 440, 3409 ± 438; $P = 0.029$). However, there was no difference in the gestational birthweight quartiles between the two groups. Fifteen cases had meconium at delivery, of which four had an unsuccessful ECV and 11 had a successful ECV. When the data analysis was restricted to deliveries between 37 + 0 and 40 + 0 weeks gestation, three of 91 unsuccessful ECVs (3.3%) had meconium, in contrast to six of 16 successful ECVs (37.5%). This difference is statistically significant ($P < 0.001$).
Conclusions: Although earlier delivery in the unsuccessful ECVs can be accounted for by elective caesarean section at 39 weeks rather than awaiting spontaneous onset of labour, the higher incidence of meconium in successful ECVs is not explained by post-maturity. It is uncertain if more forceful ECVs leading to success may also increase fetal distress during the procedure. This may be an important factor in counseling and managing labour of successful ECVs and larger studies assessing the risks of meconium aspiration and complications are warranted.

P1.025

Adolescent pregnancies in Sarawak: the unspoken facts

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Objectives: To evaluate the reproductive characteristics and outcomes of adolescent pregnancies in Sarawak General Hospital (SGH). This preliminary measure will be followed by a multicenter prospective study involving the entire state of Sarawak, which is currently in progress. This is to highlight the significance of adolescent pregnancies in Sarawak in our quest towards improving reproductive health in Malaysia.
Methods: This is a 12 month retrospective cohort study carried out from 1st September 2010 till 31st August 2011. Seven hundred and forty-four adolescent pregnancies were studied. The cases were identified from the admission registry and the case notes were retrieved. A standardised proforma was used for data extraction. The results were analysed using SPSS 17.
Results: The adolescent birth rates in SGH were 62/1000, which is significantly higher then the national indicators and rates in other developing countries. Unfortunately, one in five of the adolescent mothers were below the age of 16, 43.8% were not legally married while 79.2% had already stopped schooling. 13.4% and 1.8% were in the second and third pregnancies respectively. The contraceptive prevalence rates were 12% since 80% of the pregnancies were wanted. There were no cases of maternal or neonatal mortalities and there was good antenatal coverage (97.3%). Although there was increase in episiotomies (43.8%), small for gestational age (33%), preterm deliveries (16.7%) and nutritional anaemia (9.6%), there were no increase in miscarriages (3.1%), ectopic pregnancies (0.6%), pregnancy induced hypertension (2.4%) and postpartum haemorrhage (0.6%). There were no cases of termination, sepsis or obstructed labour. The caesarean sections rates were 12.4%. For age specific outcomes, the physical complications were higher for those aged below 17. The fetal outcomes were good (90%) and the complications were related to preterm deliveries. There were no cases of social deprivation or domestic violence although 8% required care at social institutions.
Conclusions: Adolescent pregnancies are socially and culturally acceptable in Sarawak and thus preventive measures alone are insufficient. A more targeted approach to specific age groups with better understanding of the social, nutritional and psychological implications are vital. This is best done via setting a national registry, especially in Borneo which has got high prevalence rates. It still remains a major health concern in Malaysia and there is an urgent need for a more aggressive and multidisciplinary approach in our progress towards accomplishing the Millennium Development Goals.

P1.026

Spontaneous hepatic rupture due to pre-eclampsia

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Introduction: Severe pre-eclampsia is associated with life threatening complications which are mainly cerebral and hepatic in origin. Pre-eclampsia associated hepatic haemorrhage can be difficult to diagnose due to the overlap of symptoms and signs of severe pre-eclampsia and hepatic rupture, the former masking some of the important clinical signs of the latter eg hypotension.
Case report: A 35 year old Primigravida, 31 weeks pregnant presented with vomiting and abdominal pain. She appeared peripherally shut down with a blood pressure of 190/110 and +++ of protein in the urine. She was managed according to the pre-eclampsia protocol and an hour later, on performing an emergency caesarean section (Hb-14.1, platelets-73, ALT-1944,), 200 mL of blood was noted within the peritoneal cavity prior to opening the uterus. A peritoneal wash out which was performed was clear and the abdomen was closed after inserting a drain. After extubation, the drains filled rapidly and the patient had unstable observations. She was immediately reintubated and a combined decision with the general surgeons was to perform a full laparotomy through a midline abdominal incision. A haemoperitoneum of 1000 mL was detected and by combating the intraoperative hypotension with a vasopressor, a 5 cm bleeding laceration was noted on the right lobe of the liver. The bleeding was controlled with gauze and fibrillin packing and the abdomen was closed. She underwent a re-exploration and removal of packs the following day. Her liver function gradually normalised by 6 weeks.
Discussion: Hepatic rupture has a reported incidence between 1 in 45 000 to 1 in 225 000 deliveries.[2] When a severe preeclamptic shows signs of circulatory compromise, hepatic rupture should be suspected and managed by aggressive resuscitation, prompt multidisciplinary involvement and surgical intervention.
References:
1. Saving mothers' lives: reviewing maternal deaths to make motherhood safer: 2006–2008. BJOG: An International Journal of Obstetrics and Gynaecology 2011; 118 (8):66–70.
2. Sherbahn R. Spontaneous ruptured subcapsular liver hematoma associated with pregnancy: a case report. Journal of Reproductive Medicine 1996; 41:125–128.

P1.027

Maintenance nifedipine for tocolysis in preterm labour: a prospective randomised controlled trial

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Objective: (i) To compare the incidence of preterm delivery in patients treated with or without maintenance nifedipine. (ii) To compare the incidence of recurrent preterm contractions in patients treated with or without maintenance nifedipine.

Methods: This is a prospective randomised controlled trial of 98 women experiencing preterm labour from January 2010 until August 2011. Women with preterm labour at 22–34 weeks were randomised to receive either standard dose of tocolysis with nifedipine (control group: T. Nifedipine 20 mg ½ hourly × 3 doses, then 20 mg tds for 72 h) or maintenance nifedipine up to 36 weeks (treatment group: T. Nifedipine as per control group, then 20 mg tds continued up to 36 weeks). Both groups were compared in terms of preterm delivery, perinatal outcomes and maternal side effects of nifedipine.
Result: The treatment group had a significant prolongation of pregnancy, with the mean gestational age at delivery being 36.92 ± 2.24 vs. 35.59 ± 2.82 in the control group. There were more term deliveries after 37 weeks in the treatment group, 60% vs. 40% in the control group, however this was not statistically significant. There was no significant difference in the occurrence of recurrent preterm labour between the groups.
Conclusion: This study concurred with recent trials and meta-analyses, which showed no benefit of maintenance tocolytic therapy with nifedipine with regards to episodes of recurrent preterm labour and adverse neonatal outcomes. Although there was significant prolongation of pregnancy (of about 9 days) with maintenance nifedipine, this may not be clinically significant as neonatal morbidity rates are low in gestation ≥34 weeks.

P1.028
Shortcomings in RCOG guidance: medical student and specialist registrar perspective. Cervical Cerclage (Green-top 60)

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Objective: To identify the shortcomings in the Royal College of Obstetrics and Gynaecologists' Green-Top Guideline 60 on cervical cerclage.
Methods: Analysis of literature (RCOG's Green-Top Guideline 60 on cervical cerclage) to determine insufficiencies.
Results: Three types of cervical cerclage were analysed: McDonald (transvaginal), Shirodkar (high transvaginal) and transabdominal cerclage. For each type of cerclage, the five main areas being studied are: pre-pregnancy, during pregnancy, removal of cerclage, post-Lower Section caesarean section, and following fetal death. RCOG's Guideline did not discuss pre-pregnancy insertions of McDonald and Shirodkar cerclage including effects on fertility and management of early miscarriage, and comparison with insertion in early pregnancy. There is no evidence showing detrimental effects on fertility and management of early miscarriage when transabdominal cerclage is inserted pre-conceptually. There is no data directly comparing insertion of transabdominal cerclage pre-conceptually and in early pregnancy. For transabdominal cerclage, time of insertion i.e. weeks of gestation, is not mentioned. There is no data to support laparotomy or laparoscopy approach and to demonstrate the effectiveness of transabdominal cerclage as compared to expectant management or transvaginal cerclage. There is lack of information on anaesthesia requirement for removal of McDonald cerclage. Management of McDonald and Shirodkar cerclage post-LSCS and following fetal death, whether to remove or leave in-situ for the future are not stated. No data is available to assess the effects of all cerclage on future fertility if left in-situ post-LSCS.
Conclusions: There is lack of guideline on insertions of pre-pregnancy transvaginal cerclage (both McDonald and Shirodkar). Effects of cerclage on fertility and management of early miscarriage are not mentioned for McDonald and Shirodkar although mentioned without supporting data for transabdominal cerclage. For transabdominal cerclage, no information is available on the following: time of insertion i.e. weeks of gestation, the comparison of insertion of transabdominal cerclage pre-conceptually and in early pregnancy, data supporting insertion using laparotomic or laparoscopic approach and data supporting the effectiveness as compared to expectant management or transvaginal cerclage. There is no information on anaesthesia requirement for removal of McDonald cerclage. Management of McDonald and Shirodkar's cerclage whether to remove or leave in-situ following LSCS or fetal death are not mentioned. No data is available to assess the effects of all cerclage on future fertility if left for the future following LSCS.

P1.029
Observational study of perinatal and maternal outcome of planned twin deliveries in Hospital Sultanah Aminah, Johor Bahru

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Objective: To study and compare the perinatal and maternal outcome with different planned mode of delivery (vaginal or caesarean) for twin pregnancies.
Methods: Prospective observational study which included 113 sets of twins delivered at 36 weeks of gestation from January to December 2009. Monochorionic monoamniotic twin were excluded. The primary outcome was a measure of perinatal and maternal outcome in different planned mode of delivery.
Results: Seventy one sets of twins (62.8%) had planned vaginal delivery (VD) whereas 42 sets (37.2%) had planned caesarean delivery. Among the study subjects, 61 (54%) were monochorionic diamniotic (MCDA) and 52 (46%) were dichorionic diamniotic (DCDA). In planned VD group, 52 sets (73.2%) had successful vaginal delivery and the remaining 19 (26.8%) went through emergency caesarean with fetal distress being the commonest indication (11 cases). Among those with successful VD, instrumental delivery was required in two occasions for 1st twin only, two occasions for 2nd twin only, and two occasions for both twins. With regards to planned caesarean group, 24 (57.1%) had emergency caesarean before the date of planned caesarean section (CS). Overall, there were no differences in the perinatal outcomes (umbilical arterial pH and base excess) between the twins who were scheduled for planned VD versus planned CS, VD versus emergency CS and planned CS versus emergency CS. All infants have 5-min Apgar score >8. Twins that

required post-delivery nursery care in both groups were similar (30%) with no difference in mean length of stay (1.7 days). Postpartum haemorrhage (PPH) was the commonest complication in both groups which three out of 8 (11.3%) in VD group required blood transfusion whereas six cases (14.0%) in later group with 3 (7.0%) required blood transfusion. Entire cohort patients prefer singleton with vaginal delivery in next pregnancy ($P < 0.009$).
Conclusion: In our hospital, twins delivered vaginally had comparable perinatal and maternal outcomes compared to twins delivered via CS. With appropriate patient selection, antenatal care, intra-partum fetal surveillance, good co-operation with neonatal team and patient counseling, planned vaginal delivery still remains a safe mode of delivery.

P1.030
Observational study of perinatal outcome of 2nd twin in relation to inter-twin delivery interval in Hospital Sultanah Aminah, Johor Bahru

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Objective: To study and compare the perinatal outcome of the 2nd twin in relation to inter-twin delivery interval.
Methods: Prospective observational study in twin births delivered 34 weeks (January–December 2009). A total of 139 twins were included. The primary outcome was a measure of umbilical arterial blood parameters and Apgar score in relation to inter-twin delivery interval according to mode of delivery, chorionicity and presentation of 2nd twin.
Result: Sixty three sets of twin were born vaginally and 76 set via caesarean section (21 electives, 55 emergencies). There were no statistically significant differences in Apgar score and umbilical arterial blood gas parameters between the twin siblings. The mean inter-twin delivery interval in vaginally delivery group was 9.33 min, elective caesarean group was 1.76 min and emergency caesarean group was 1.71 min. All twin's Apgar score was >8. The mean intra-pair differencesin umbilical arterial pH and base excess showed no significant differences in all different mode of delivery. In comparing the effect of chorionicity, mean inter-twin delivery interval was similar for both MCDA (5.13 min) and DCDA group (5.23 min). The differences of umbilical arterial blood parameters between twin siblings also showed no significant differences ($P = 0.3$, $P = 0.1$, respectively). With regard to the cephalic presentation of 2nd twin versus non-cephalic presentation, similar results were observed in both Apgar scores and umbilical blood parameter. However, in twins with delivery intervals of 15 min or more, the second twins had significantly lower umbilical arterial pH ($P = 0.02$) and greater base deficits ($P = 0.01$) compared to 1st twin regardless of mode of delivery, chorionicity and 2nd twin presentation.
Conclusion: In centre with expertise in twin management, vaginal delivery remained relatively safe option regardless of chorionicity (MCDA/DCDA) or presentation of 2nd twin. Further studies should be conducted in exploring the possible contributing factors to inter-twin delivery interval and relationship between inter-twin delivery intervals with perinatal outcome.

P1.031
The effects of maternal body mass index (BMI) on the pregnancy outcome among primigravida who delivered at Hospital Tengku Ampuan Afzan (HTAA), Kuantan, Pahang

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Objective: To measure the prevalence of maternal and fetus/newborn complications during antenatal, intrapartum and postpartum periods and the intrapregnancy weight gain for each BMI category.
Methods: This is a cohort study between December 2011 and November 2012. The study includes all primigravida who booked before 14 weeks of gestation. Upon delivery women had their antenatal, intrapartum and postpartum events reviewed and then categorized into five BMI groups; underweight (≤19.9 kg/m^2), normal (20–24.9 kg/m^2), overweight (25–29.9 kg/m^2), obese (30–34.9 kg/m^2) and morbidly obese (>35 kg/m^2). Women were followed up until discharged and reviewed again at 6 weeks postpartum. All statistical analyses were performed with the use of SPSS for Windows, version 18.0 (SPSS) and P value of <0.05 was taken to be statistical significant.
Results: A total of 102 women were enrolled. There were 29 (28.4%) underweight, 36 (35.2%) normal weight, 14 (13.7%) overweight, 19 (18.6%) obese and 3 (2.9%) morbidly obese women. The mean age was 26 years (SD 4.0) and the majorities were Malays (90.2%). The morbidly obese group was found to experience higher percentage of gestational diabetes mellitus (33%), pregnancy induced hypertension (100%), preterm delivery (33%), augmentation (100%) and instrumentation (33%). Risk of caesarean section was highest (64%) in the overweight group. Highest risk of shoulder dystocia (33%) and wound dehiscence (15.8%) were observed in the obese group. The underweight women had higher risk for preterm delivery (17%). The mean intrapregnancy weight gain for each BMI category were:12.2 ± 4.6 kg (underweight), 13.6 ± 4.4 kg (normal), 12.8 ± 5.5 kg (overweight), 12.4 ± 6.2 kg (obese) and 0.8 ± 7.8 kg (morbidly obese). Morbidly obese group had lower intrapregnancy weight gain compared to other groups ($P = 0.004$).
Conclusion: The maternal risk increases as the BMI increases whereas the fetal risk increases with the extreme of BMI (underweight and morbidly obese). Inappropriate weight gain was observed in all groups but was significant in the morbidly obese.

P1.032

A 5 year review of perinatal mortality in Putrajaya Hospital Malaysia from 2006 to 2010 towards achieving Millenium Development Goal 4

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Objective: To ascertain the perinatal mortality rate (PNMR) in Putrajaya Hospital (PJH) for the past 5 years (2006–2010), the causes and the associated sociodemographic data.
Methods: Using the annual perinatal census in 2006–2010 for PJH, the data was obtained specifically based on the National Stillbirths and Neonatal forms where the data was collected prospectively. The causes of perinatal mortality were grouped according to the Modified Wigglesworth classification. The data was then organized into the Microsoft Excel files and the results were analyzed descriptively.
Results: The total births for the whole 5 years in PJH (2006–2010) was 27 067. The Crude PNMR is 6.07, 5.10, 3.76, 4.23 and 2.54 respectively. The Corrected PNMR is 5.27, 3.88, 2.90, 3.39 and 1.27 respectively. The stillbirth rate is 4.66, 4.08, 2.22, 3.22 and 1.82 with the early neonatal death (ENND) rate of 1.42, 1.02, 1.54, 1.02 and 0.73 respectively. The majority is macerated stillbirth (MSB) (55.2%), followed by ENND (26.70%) and fresh stillbirth (FSB) (18.10%). The major cause of mortality is due to prematurity (32.8%) followed by unknown causes (29.31%) and lethal congenital malformation (LCM) (23.30%). In 2010, there was no death due to asphyxia. In the preterm babies, 31.30% were <28 weeks period of amenorrhea (POA) and near term i.e. 34–36 weeks. Majority (32.80%) weigh <1001 g. The mothers were mainly between 28 and 30 years old and 50% were multiparous, with primigravida (44%) and grandmultiparous (6%). The cases mainly involved the ethnic Malays (84.50%). Majority of them received antenatal care (ANC) at health clinics (43.10%), followed by hospital center (29.30%) and 8.6% had no ANC.
Conclusion: The crude and corrected PNMR in PJH for the past 5 years (2006–2010) is low and reducing in trend i.e. from 6 per 1000 to 2 per 1000 births. There is also a decrease in both the stillbirth and ENND rate. The main cause is prematurity followed by unexplained and LCM. Malay multipara between 28 and 30 years old, accounts for majority cases with almost half receiving their ANC from health clinics. Further research needs to be performed to ascertain the causes of the MSB and identify risk factors for prematurity in PJH population.

P1.033

Propess: is it a favorable option for an unfavorable cervix?

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Background: Induction of labour is the most commonly performed obstetric procedure. The best method for labour induction remains unknown . Propess is a controlled-release of 10 mg of dinoprostone, delivered over 24 h from a single vaginal insert. The most significant adverse effect is uterine hyperstimulation with and without an effect on fetal heart rate.
Methods: We performed a retrospective cohort analysis between January 2008 and September 2009 to assess the efficacy of Propess for induction of labour in primiparous and multiparous women, a small group of previous caesarean section. Ninety eight women with various indications for induction of labour with, cephalic presentation, Bishop score ≤4, between 37–42 weeks gestation, with intact membranes were included in the study. Their notes were reviewed and data collated and analysed. The primary outcome included induction to delivery interval, mode of delivery, rate of oxytocin augmentation and incidence of complications such as uterine hyperstimulation, fetal distress. Maternal complication included: Postpartum haemorrhage (PPH), intrapartum chorioamnionitis, neonatal complications such as low Apgars and cord pH and special care baby unit (SCBU) admission.
Results: Propess has not been proven to be an effective option for induction of labour in primiparous women. Within this group the rate of spontaneous vaginal delivery was significantly lower (42%) and operative vaginal deliveries (15%). The caesarean section rate was 41%. Forty-five percent of this was for fetal distress and the 50% was due to failed induction and failure to progress. There was a higher incidence of hyperstimulation requiring removal of propess 18.80%, and higher incidence of CTG abnormalities 7.54%. There was one SCBU admission, maternal complications included one PPH, one chorioamnionotis and Abruption within this cohort. The spontaneous vaginal delivery rate had improved to 61% in para 1, and 73% in para 3 group. The caesarean section rate still remained high at 36%, and 27% respectively. Sixty-seven percent of the caesarean sections were secondary to fetal distress. There were higher incidence of hyperstimulation leading to low pH on cord gas analysis 7.127.20 in parous women. Overall 33 women required additional prostin, 10 women required an intracervical catheter.
Conclusion: Propess has not been proven to be effective especially in primiparous women. Its efficacy is better in multiparous women, however not recommended in VBAC. Propess would seem to be more acceptable by patients due to the smaller number of applications. It is not cost effective keeping in mind the prolonged hospital stay and higher eventual caesarean sections.

P1.034

Productivity loss due to maternal ill health: a Sri Lanka experience

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Objective: In developing countries, 58–80% of all pregnant women experience acute ill health conditions during pregnancy. Purpose of this study was to determine the productivity loss

associated with the most recent episode of ill health among a sample of pregnant women from Sri Lanka.
Methods: The study population included all pregnant women with gestational ages ranging from 24 to 36 weeks and residing in Anuradhapura district. A two stage cluster sampling procedure was used and all consented pregnant women were interviewed at clinic centres. We used the culturally adapted Immpact tool kit for productivity cost assessment.
Results: Of the 466 pregnant women studied, 421 (90.3%) reported that they had at least one ill health condition during the pregnant period. Of the 421, in 353 (83.8%) the most recent episodes of ill health were reported as affecting their day to day life. Total incapacitation requiring another person to carry out all their routine activities during the last episode of ill health was reported by 122 (26.1%) women. In this study sample, during the last episode of ill health, total number of days lost due to absenteeism was 3356 (32.9% of total loss) and the days lost due to presenteeism was 6832.8 (67.1% of the total loss). Of the 353 women with ill health conditions affecting daily life, 280 (60%) had coping strategies to recover loss of productivity. Of the coping strategies used to recover productivity loss during maternal ill health, 76.8% ($n = 215$) was an intra-household adaptation, and 22.8%($n = 64$) involved social networks. Total days recovered through coping strategies were 5329.8. The adjusted total loss was 4961 days with a median of 4.2 days per illness (IQ range 0–18 days) an average of 14.1 days per episode among the women who reported ill-health conditions, affecting daily life. Pregnant teenagers lost a median of 6 days compared to 18 days among the 20–34 age group women, and 30 days among women, more than 34 years of age (Table 4). A similar increase in the productivity loss was observed from the first pregnancy to the third pregnancy. Median days lost (adjusted) among pregnant females with only primary education was 14 days compared to 4.1 days among the others.
Conclusions: This study provides strong evidence that maternal ill health could have a major impact on household.

P1.035
Audit on trial of instrumental delivery in theatre

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Introduction: Instrumental vaginal deliveries account for 10–15% of births in the UK. The choice of instrument and the experience of the operator are identified as risk factors for fetal and maternal morbidity. The objective of this audit is to determine the outcome of the trial of instrumental deliveries in our department.
Methods: All instrumental deliveries done in operating theatre were identified using Euroking maternity system. Retrospective case note analysis of trial of instrumental deliveries undertaken in the maternity unit of the Royal Surrey County Hospirtal (RSCH) between October 2009 and October 2010. Successful outcome of instrumental delivery was the primary outcome. Secondary outcomes were decision to delivery interval, major haemorrhage and poor neonatal outcome.
Results: One hundred and thirty cases were managed as trial of instrumental delivery in theatre because of prolonged second stage and/or fetal distress. Ninety-eight (75%) of these cases were successful and 32 (25%) cases which failed needed a caesarean section. The decision to delivery interval was <60 min in 85 (65%) of the cases and consultant supervision on labour ward added to increased success rates. Failed instrumental delivery leading to LSCS contributed for most of the cases of major obstetric haemorrhage with blood loss >1500 mL and fetal morbidity (pH < 7.1).
Discussion: Rotational instrumental delivery is a difficult skill to learn and the success is directly linked to the experience of the operator. Consultant presence increased the success rate of instrumental delivery. Occipito-posterior position is a common reason for the instrumental delivery in operating theatre. Kiwi Ventouse cup is the preferred instrument of choice amongst junior staff, but may be associated with a poorer success rate. As 60% of trial of instrumental deliveries occurred out of hours, it stresses the importance of practical skills training and hands on teaching.

P1.036
Diet plus insulin compared to diet alone in the treatment of gestational diabetes milletus mothers in the Hospital Universiti Sains Malaysia (HUSM), Kelantan

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Objective: To determine the proportion of mothers with gestational diabetes mellitus (GDM) whom required insulin in order to achieve normoglycemia and to look at the maternal risk factors associated with the insulin requirements in the study populations.
Methods: A prospective cohort study involving 198 mothers with GDM and the following data were collected: sociodemographic data, OGTT indications and results and HbA1c level during study entry. Participants were educated on proper diet by a dietician during the study entry. After 2 weeks of proper diebetic diet, preprandial BSP were taken. Those participants who had preprandial BSP range from 3.5 to 5.9 mmol/L will continue on diebetic diet while insulin was added on to those participants who had preprandial level >5.9 mmol/L.
Results: 29.8% of the 198 GDM mothers required insulin injection to achieve the targeted BSP. There were significant association observed between multiparity, maternal obesity, previous history of GDM, previous history of GDM required insulin injection, FBS > 5.3 mmol/L at OGTT, POG at diagnosis of GDM and HbA1c value at study entry with the insulin requirement in those GDM mothers.
Conclusions: The incidence of insulin requirement in GDM mothers was 29.8%. It is possible to predict the requirements of insulin in the management of GDM mothers. Thus to recognise the group which requires close observation and intensive therapy among GDM mothers

P1.037

Observational study to determine factors affecting inter-twin delivery time interval

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Objective: To determine various factors that affect prolonged inter-twin delivery time interval in vaginal delivery .
Methods: Prospective observational study on twin births delivered at 34 weeks in the largest maternity unit in Malaysia from January to December 2009. Multiple possible factors were identified and their relationships with inter-twin delivery time interval were examined.
Results: Sixty-three sets of twins were included in the study: 38 sets were Monochorionic Diamniotic (MCDA) and 25 sets Dichorionic Diamniotic (DCDA). In our study, we have observed that instrumental delivery of 2nd twin affects inter-twin delivery time interval. Time taken for instrumental group was significantly longer with mean 18.5 mins compared to time taken for non-instrumental group, mean 8.4 min, $P = 0.001$. All instrumental deliveries were performed due to fetal distress. There is no relationship between the maternal factors (age, parity and BMI), fetus factors (chorionicity, gestational age of delivery, presentation of 2nd twin and weight discordance) and intrapartum intervention (oxytocin augmentation and manipulation of 2nd twin) with inter-twin delivery time interval.
Conclusion: Only instrumental delivery of 2nd twin affects inter-twin delivery time interval was obverse. Further studies should be conducted in exploring the relationship between inter-twin delivery time intervals with perinatal outcome.

P1.038

Re-audit of the management of 3rd and 4th degree perineal tears

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Objective: To evaluate the adherence of third and fourth degree perineal tears management against the Royal College of Obstetricians and Gynaecologists (RCOG) guideline.
Methods: All women who sustained third and fourth degree perineal tears between January and December 2011 at Maidstone and Tunbridge Wells Hospitals NHS Trust were identified from Euroking database. Retrospective data was collected from 120 case notes.
Results: During the 12 month period, there were 3265 vaginal deliveries. One hundred and fifteen (3.5%) had sustained third degree tears whilst five patients (0.1%) had 4th degree tears. All of the women were over 37 weeks of gestation and their mean age was 31 years. Eighty percent of them were nulliparous and the fetal birthweight >4 kg was 21.7%. Almost two fifths (38.3%) of the patients had operative vaginal deliveries. Out of the 120 patients, 44% of them required mediolateral episiotomy. Written consent for perineal repair was obtained in 91% of the patients. All perineal repairs were carried out in the operating theatre under regional anaesthesia (100%). 93.3% of the tears were sutured by obstetric registrars and the remaining cases by SHOs (4.2%) under supervision or consultants (2.5%). All of the patients had their anal sphincters and anal epithelium repaired with PDS and Vicryl respectively according to the RCOG guideline. In terms of anal sphincter repair, 61% of the patients had an overlapping method, 33% had an end-to-end method whilst 6% was not mentioned. Perineal diagram was included in 65% of the operative notes. We achieved 100% compliance in postoperative management in bladder care, prescribing analgesia and broad-spectrum antibiotics and arranging postnatal appointment. Four percent of the patients had not received laxatives. The mean length of hospital stay was 1.6 days. All of these patients received third and fourth degree tear information leaflets. Eighty-five percent of the patients were followed up in gynaecology outpatient clinic at 6–12 weeks postpartum. None of the patients presented with faecal incontinence at follow up visit.
Conclusion: This re-audit showed good compliance with the RCOG guidelines particularly intra and postoperative management. The number of anal sphincter injuries identified increased by 1.7% from the previous audit. This may reflect that an increased awareness results in better detection of anal sphincter injury. In order to improve the standard of care, we recommend the introduction of a revised operative proforma to assist with the management and documentation of the third and fourth degree tear repairs.

P1.039

Review of caesarean deliveries at full cervical dilatation

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Background: Caesarean section (CS) rates are increasing. Second stage CS is associated with a higher risk of morbidity compared to instrumental deliveries. Reviewing CSs can help to assess the quality of clinical care.
Objective: To evaluate (i) the rate of caesarean deliveries in second stage of labour, (ii) the indication for delivery and (iii) the associated fetal and maternal morbidity.
Methods: Women who underwent second stage CSs at King's College Hospital, London from May 2010 to April 2011 were identified retrospectively via Euroking database. Eighty-one patients were identified and reviewed.
Results: During the 12 months period, 81 of 963 emergency CSs were performed in the second stage of labour. The majority of women were primiparous (74%) and in spontaneous labour (75%). Eighty-one percent of the women were 3742 weeks of gestation. Fifty-four percent of women had second stage CSs without trial of instrumental delivery. Seventeen percent of deliveries were attended by consultants (out of a possible 75% deliveries). The majority of babies (59%) were delivered because of prolonged second stage with a mean duration of 202 min for primiparous and 121 min for multiparous from full dilatation to delivery. Amongst the 26% multiparous women, 2.4% of them were failed VBAC. Sixteen of 38 primiparous women (38%), who

had prolonged second stage, did not receive oxytocin. Four percent of babies were admitted to the neonatal intensive care unit with various reasons. Twenty-six percent of babies had no cord gases performed and 29% of these babies were delivered for presumed foetal compromise. Estimated blood loss was documented in all of the cases. Ten percent of women had a postpartum haemorrhage ≥1000 mL. None of them required blood transfusion.

Conclusion: Strategies for improved care should include increased consultant presence, meticulous documentation and ongoing training of junior obstetric staff to ensure safe intrapartum care.

P1.040

Bakri postpartum balloon in the management of postpartum haemorrhage in Sabah Women's And Children's Hospital (SWACH): A Sabah Experience

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Objective: To review our experience with the use of intrauterine tamponade via utilisation of Bakri postpartum balloons in the management of postpartum haemorrhage.

Methods: Patients with postpartum haemorrhage whose management involved use of Bakri postpartum balloons were identified and reviewed retrospectively.

Results: Bakri postpartum balloons were used in 31 patients since its first introduction in April 2011. Twenty four cases (77.4% of total) were traced and reviewed. The causes of postpartum haemorrhage for these cases were uterine atony (14 cases), morbidly adherent placenta including placenta accreta and increta (5), abruptio placenta (1), miscarriage (1), cervical ectopic (1), uterine inversion (1) and idiopathic thrombocytopenic purpura (1). Estimated blood loss at the point of Bakri insertion ranged from 400 to 9500 mL (mean 2838 mL). Routes of Bakri insertion were transvaginal and transabdomen in 19 and five patients respectively. Water volume used to achieve tamponade ranged from 40 to 500 mL (mean 272 mL with two missing data; 40 mL used for a case of atonic uterus with prior B-Lynch suture). Seventeen cases had vaginal pack inserted. All cases had prophylactic antibiotics and oxytocin infusion after Bakri insertion. Further blood loss post-Bakri insertion ranged from minimal to 1200 mL (mean 221 mL with one missing data). Duration of use ranged between 2.5 and 54 h (mean 19.3 h with one missing data). Postpartum haemorrhage was controlled in 17 of 24 cases (70.8%). The remaining seven cases had massive postpartum haemorrhage (defined as blood loss of 1.5 L or more), of which five were due to uterine atony and two were due to morbidly adherent placenta. Five required hysterectomy (20.8%). There were three maternal deaths, one of which underwent hysterectomy while the others did not. Two were referred cases, had delivered prior to and arrived at SWACH in a moribund state. There was one fortuitous death due to dengue haemorrhagic fever. The hysterectomy rate among massive postpartum haemorrhage patients in 2011 was 13.6% as compared to 24.4% in 2010.

Conclusion: Bakri postpartum balloon is a simple, easy and effective adjunct in the management of postpartum haemorrhage. Its use is the main contributory factor for the reduction in hysterectomy rate among massive postpartum haemorrhage as it was the only change in our management of postpartum haemorrhage in 2011. This technique has now been introduced state wide since October 2011 with the provision of Bakri and training programs to all hospitals.

P1.041

Caecal volvulus following a repeat caesarean: a case report and review of literature

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Caecal volvulus is a rare condition especially when related to pregnancy. It carries a high morbidity and mortality rate due to delay in recognition. It is thought to have an embryological pathogenesis giving anatomical susceptibility. When coupled with conditions of late term pregnancy such as, adynamic ileus, chronic constipation and distal colon obstruction, it is thought to lead to caecal displacement, hyperperistalsis and colonic distension. Clinical series have also reported an association with previous abdominal surgery postulating that postoperative adhesions promote volvulus formation through creation of fixation points and fulcrum of rotation for the mobile right colon. Delayed treatment leads to bowel necrosis.

Case presentation: We present the case of a 36 year old woman who was found to have a caecal volvulus at laparotomy 4 days after a repeat caesarean section at term. She previously had an elective and a history of endometriosis. At the time of repeat caesarean, abdominal entry was difficult due to fibrosis from her previous scar. She had a moderate postpartum haemorrhage and a pelvic drain was left *in situ* for 48 hours. She was discharged home after 2 days. Within 24 hours she was readmitted with abdominal distension and pain. Abdominal Xray showed a large distended right loop of bowel and distal colon showed evidence of faecal loading. A phosphate enema failed to resolve her symptoms. The X-ray was reviewed by a radiologist suggesting a caecal volvulus. At laparotomy she had ileocaecal resection, appendicectomy, right colon fixation and caecostomy. A Foleys catheter was inserted through the caecostomy for decompression. She was discharged 10 days later. All being well she will have the caecostomy closed after 6 weeks.

Discussion: The overall incidence of caecal volvulus is reported between 2.8 and 7.1 per million people per year. It accounts for 1% of adult intestinal obstructions and 25% of all volvulus. As previously mentioned, clinical series have reported up to 53% of patients having had previous abdominal surgery making previous caesarean section a major risk factor as it is such a common procedure. A high index of suspicion is crucial to accurately diagnose and ensure prompt treatment if serious morbidity and mortality is to be avoided. Surgical treatment as described is the mainstay of management. When presentation is less acute and there is no bowel necrosis, conservative measures such as enemas, colonoscopy or barium enema can be successful but with a high recurrence rate.

P1.042
Unusual case of angio oedema in pregnancy

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We present an unusual and a fascinating case of angio oedema. A 32 year old female presents with sudden onset difficulty in breathing and swelling of her face at 38 weeks of gestation. Having treated the current problem she went on to have an emergency caesarean section under general anaesthesia due to worsening of angio oedema. Following delivery angio oedema improved remarkably. A similar episode was noted in her previous pregnancy at around the same gestation which prompted delivery-following which angio oedema subsided. Interestingly her first pregnancy which was with a different partner was uneventful with no angio oedema. This points to a possible hypersensitivity to paternal genetic material. This case opens a wide range of discussion surrounding causation of the pathology and management of future pregnancies.

P1.043
Maternal and fetal outcomes of HIV positive pregnant women 2007–2011 at King's College Hospital, London

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Objective: The aims of this study were to audit HIV positive pregnancies, with a sub analysis of patients with pProm and prom from 2007 to 2011 at King's College Hospital London. We compared the adherence to the BHIVA guidelines and measured maternal and foetal outcomes in HIV pregnancies. This group of patients was compared with the overall population at King's College Hospital in 2011 highlighting any differences in outcomes.
Methods: An annual retrospective audit study was undertaken using patient notes and electronic databases, from both the HIV medical service (at the Caldecot centre) and the King's Obstetric Service. Data was collected from all HIV positive women booked between January 2007 and December 2011 was compared to data obtained for all bookings between January 2011 and December 2011.
Results: There were 290 pregnant women with HIV and 70 women with PPROM or PROM. The uptake rate for HIV testing had been consistently above 95%. Most women received HAART- and achieved an undetectable viral load. During this time no breastfeeding was supported, and all patients used formula feeding. Routine screening for GU infections was offered and accepted by all. Caesarean sections were only undertaken for obstetric reasons. There were 61 women who had PROM. All women but one (who was unbooked) were on HAART. Viral load was undetectable in all but five women (50–100 copies/mL). The delivery interval was >4 h ranging from 5 to 37 h. There were nine women with PPROM. They were managed conservatively with caesarian only for obstetric reasons. The pregnancies were prolonged anywhere between 1 and 16 weeks. There was a significant increase in the number of placenta previa cases, fewer instrumental deliveries and did not result in a significant rise in emergency caesarean rate. Our data shows no significant increase in pre-eclampsia, intrauterine growth restriction, gestational diabetes or premature delivery. Since July 2005 there was no vertical transmission despite prolonged rupture of membranes, vaginal delivery and EMLSCS.
Conclusions: There were no incidences of vertical transmission, even in those with prolonged and preterm ruptured membranes. The long term effect of the previous caesarean sections are beginning to be born out with the increase in incidence of placenta previa. This data supports the conservative approach advocated by BIVA in those with HIV as long as the viral load is undetectable. Further data is required for those with low viral loads of 50–100 copies/mL.

P1.044
Delivery after third-or fourth-degree perineal tear

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Objective: The aim of the study is to determine the appropriate method of delivery for patients who previously sustained a third- or fourth-degree perineal tear at vaginal birth as defined by the RCOG Green top guidelines No 29 (2007).
Methods: Patients who had vaginal delivery complicated by third or fourth-degree perineal tear over a period of 3 years (between 2007 and 2009) and who subsequently had a further pregnancy booked in our hospital were identified. We used the hospital database, labour ward registry and patients record notes. Data obtained were the degree of perineal tear, existence of any related symptoms during the subsequent pregnancy and the method of delivery, the degree and sequelae of any further perineal rear. A postal questionnaire was sent to patients who delivered vaginally to estimate any worsening of faecal symptoms.
Results: During the 3 year period there were 139 patients who had third- and fourth-degree perineal tear in our hospital. Thirty of those patients had a further pregnancy booked in the same hospital. The perineal tear had been a third- and fourth-degree in 28 and two patients respectively. Fifteen patients had a caesarean section either because they wanted to avoid a similar complication or because of other obstetric reasons and included the two patients with previous fourth-degree tears. Fifteen patients had a second vaginal birth. None of those had symptoms of anal incontinence. At the second delivery three patients had an episiotomy and one patient had a further third degree tear. The remainder had either intact perineum or first- or second-degree tears. We were able to contact 13 of these patients. Two (15.3%) of those patients reported incontinence of flatus after an average period of 15 months.
Conclusion: Second vaginal birth after third- and fourth-degree perineal tear may lead to worsening of anal incontinence. Patients should be counselled about this risk to be able to make a balanced decision about the mode of delivery.

P1.045

Pregnancy outcome of a patient with jejunostomy following transhiatal oesophagectomy for functional dysphagia

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Case report: We present a 34 year old lady in her three pregnancies with a pre-existing jejunostomy and its complications. The patient had a long history of dysphagia to solids following an episode of choking on a chicken bone in 2003. She was initially diagnosed with globus hystericus by ENT surgeons following a normal endoscopy and symptoms of anxiety and depression. However, videofluoroscopy had showed a dysfunctional oesophageal stage of swallow and poor peristalsis. Prior to completing investigations the patient became pregnant with her first child and a planned oesophageal manometry was put on hold. The first pregnancy was complicated by poor nutrition, due to a diet of pureed food. She was admitted at 29 weeks for nutritional support but proceeded to a vaginal delivery at term. Following the birth of her first child, manometry showed hypertensive lower oesophageal sphincter with ineffective oesophageal motility; had a series of oesophageal dilatations that improved symptoms for short periods of time. At this point she was drinking 200 g chocolate, six Ensures plus 20 cups of tea a day for nutrition. She then became the first patient in the UK to have a high resolution oesophageal manometry test which showed incoordination between different parts of the oesophagus giving a diagnosis of functional dysphagia. Incidence 1:200 000. Symptoms became unbearable and transhiatal oesophagectomy was performed in 2005 with insertion of a temporary feeding jejunostomy that was not removed as planned due to continued dysphagia. The patient then became pregnant, was seen regularly in the antenatal clinic. The pregnancy was uncomplicated with normal fetal growth until 24 weeks when the jejunostomy became intermittently blocked. At 30 weeks of gestation with an oral diet of soup, ice lollies and milkshakes, the nightly jejunostomy feeds were delivering <50% of her requirements. Mechanical obstruction of the jejunostomy was diagnosed due to pressure of gravid uterus. She had a caesarean section at 31 weeks of gestation due to port retraction and infection at entry site – a healthy boy with weight 1.64 kg. Post delivery the jejunostomy returned to normal functioning. In her third pregnancy, the jejunostomy tube was removed at 27 weeks. Due to weight loss, a nasojejunal tube was reinserted at 29 weeks. Delivery was by caesarean section at 36 weeks with baby weighing 2.35 kg.

P1.046

Women's perception of BMI and understanding of weight gain in pregnancy guidelines

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Objective: To assess the perceptions women in early pregnancy have of their own body mass index (BMI) and their knowledge of appropriate weight gain in pregnancy.
Methods: A cross-sectional survey of 388 pregnant women attending a nuchal translucency scan at 11 to 13 + 6 weeks of gestation in community radiology units in Christchurch. Women completed a questionnaire to establish basic demographics including parity, whether they had been weighed during this pregnancy and a question asking them to identify their BMI status (underweight, normal weight, overweight or obese). They were asked what the appropriate weight gain for themselves during their pregnancy would be. Options included the 2009 Institute of Medicine (IOM) weight gain in pregnancy guidelines and the answers 'I should not gain any weight' and 'it does not matter how much weight I gain'. Participants had their height and weight measured using calibrated equipment and their BMI calculated.
Results: Participants' age ranged from 17 to 50 (mean 31). Fifty percent of women were multiparous. Fifty-three percent of women had a university qualification. Ethnicities were 75% New Zealand European, 5% Asian, 4.5% Maori and 15.5% 'other'. Sixty percent of women had been weighed during this pregnancy. Calculated BMI of participants was: 2% (n = 6) underweight, 52% (200) normal weight, 29% (112) overweight and 18% (70) obese. In the questionnaire 2% (7) identified themselves as underweight, 70% (271) as normal weight, 25% (98) as overweight and 2% (8) as obese. Obese women were most likely to incorrectly identify their BMI with 12 perceiving themselves as normal weight, 50 as overweight and eight as obese. Twenty percent (40) of normal weight women identified the correct weight gain in pregnancy as did 37.5% (42) of overweight participants and 24% (17) of obese participants. Twelve percent (50) of participants answered 'it does not matter how much weight I gain', and three participants 'I should not gain any weight in this pregnancy'. Appropriate weight gain in pregnancy was overestimated by 63% of obese women.
Conclusion: Women incorrectly identify their BMI and are not having their BMI's calculated by their carers. The majority of women are not aware of the amount of weight the IOM guidelines recommend gaining during pregnancy. Obese women were more likely to overestimate appropriate weight gain during pregnancy and to incorrectly identify their BMI.
This study was funded by the University of Otago as part of a Masters of Health Sciences.

P1.047

Weight gain in pregnancy

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Objective: Assessment of weight gain during pregnancy is not standard practice in antenatal care in the UK. Although BMI is recorded at booking and is an important indicator of pregnancy risk, there is no formal monitoring of weight gain. UK recommendations on weight gain in pregnancy vary from 7–15 kg

but there is no national evidence based guidance.
Recommendations from the American Institute of Medicine are tailored to BMI, whereby obese women BMI > 30 kg/m^2 should aim for <7 kg weight gain, and those with normal BMI 19.8–25.9 should aim for 11.5–16 kg weight gain.
Methods: The aim of this study is to look at the effect of weight gain in pregnancy. We conducted a prospective cohort study at St Mary's Hospital, London, looking at 143 term women admitted to labour ward from July to October 2011. Weight gain during pregnancy was calculated by subtracting booking weight from weight pre-delivery. Multiple gestation, stillbirths and planned caesarean sections were excluded.
Results: 62.4% gained the recommended weight (7–16 kg) during pregnancy, whilst 28.6% gained more than recommended. In those with excess weight gain (regardless of BMI) there was an increased rate of pre-eclampsia (14.6% vs. 7.8%), need for post dates induction of labour (19.4% vs. 13.5%) and macrosomia (17% vs. 7%). In those who were clinically obese, weight gain >7 kg was associated with an increased rate of gestational diabetes (30.7% vs. 20%) and need for post dates induction of labour (19.2% vs. 0%).
Conclusions: These findings provide further evidence of the negative effects of excessive weight gain during pregnancy, especially in those already clinically obese. We suggest that current UK antenatal practice should include regular assessment of weight, so that excessive gain can be avoided and optimal pregnancy outcomes achieved.

P1.048
Clinical usefulness and safety of the anti-bacterial coated multifilament suture (Vicryl Plus®) and monofilament suture (Monosyn®) in hysterectomy

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Objective: The objective of this clinical trial was to evaluate the safety and usefulness of Monosyn®, a synthetic absorbable monofilament, in the field of obstetrics and gynecology in Korean women.
Methods: This study, a phase IV clinical trial, included 50 patients who underwent total open hysterectomy or total laparoscopic hysterectomy from October 1 2007 to March 31 2008 in the Department of Obstetrics and Gynecology of Seoul Asan Medical Center. Vicryl Plus® was used as a comparison group of Monosyn®. When stitching the stump after performing hysterectomy, we used the subject Monosyn® or the comparison Vicryl Plus®. We observed the knot security, knot breaking load, and placing property of the sutures during operation and evaluated with the four levels of score. We also evaluated and comparatively analyzed the wound recovery state and cosmetic condition, including infection, swelling or dehiscence of the suture site, when visiting the hospital 4 weeks after discharge.
Results: There was no significant demographic difference in age, height, and weight between the Monosyn® group and Vicryl Plus® group. In addition, no significant difference was found in the operation time and hospitalization duration by operation method between the two suture groups. As for the knot security and placing property during operation, there was no significant difference found between the two groups. In the knot breaking load, the satisfaction for the Monosyn® group was significantly high in both aspects of knot running and knot tensile strength ($P < 0.05$). In the evaluation of handling in general, the satisfaction for the Vicryl Plus® group was significantly high ($P < 0.05$). In the evaluation 4 weeks after discharge, there was no difference found in the inflammation, secretion and color change between the two groups, while the edematous change was significantly high in the Vicryl Plus® group ($P < 0.05$). As for the cosmetic aspect of the operation wound recovery condition, the satisfaction for the Monosyn® group was significantly high ($P < 0.05$).
Conclusion: Monosyn® had the characteristics suitable for hysterectomy in terms of knot security, knot breaking load, and placing property, and showed better results for the prevention of postoperative wound infection. Therefore, it is believed that Monosyn® can be used as a suture that can replace the chromic catgut and Vicryl®, which have been widely used in gynecologic surgery.

P1.049
Vitamin B12 deficiency presenting as pancytopenia in pregnancy: a case report and review of literature

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Vitamin B12 deficiency is a well-known cause for megaloblastic anemia and pancytopenia, however, the incidence in pregnancy is rarely reported. We report a case of 32 year-old multigravid woman who was diagnosed with megaloblastic anaemia since 22 weeks of gestation and progressed to severe pancytopenia at 30 weeks of gestation, secondary to B12 deficiency related to dietary and sociocultural habits. The serum folate and iron were normal through-out pregnancy. Treatment with parenteral cyanocobalamin results in sustained improvement of haematological parameters. The pregnancy was carried to term and the baby was born small, weighing 2050 g but otherwise well at birth and had normal developmental milestones thereafter. This case illustrates the clinical presentation of maternal B12 deficiency and demonstrates the importance of detecting and treating maternal B12 deficiency during pregnancy in at-risk patients. Failure to diagnose and institute treatment carries significant risks to both mother and child. Oral B12 supplementation should be considered for patients who are strict vegetarians or consume minimal animal product in their diet.

P1.050

Evaluating HIV awareness among the obstetric population seen at a tertiary level hospital in Malaysia

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Introduction: The HIV screening program for antenatal mothers was piloted in Malaysia in 1997 and a formal program was implemented in 1998 in all public health facilities with the aim of detecting maternal HIV infection and providing treatment to reduce the vertical transmission. The pre-test counselling and the actual screening test were performed by staff nurses in primary care facilities.
Objective: To evaluate the level of knowledge of pregnant mothers regarding HIV infection in pregnancy, their attitude towards routine screening of HIV infection in pregnancy and the effectiveness of pre-test antenatal HIV counselling.
Methods: A self-administered questionnaire was used as a survey instrument. All obstetric patients admitted to the antenatal wards for various reasons from August to November 2011 were invited to participate in the survey.
Results: There were 650 respondents to the survey. We found the level of knowledge regarding the effects of HIV infection on pregnancy and vice versa to be poor, but the knowledge regarding preventing vertical transmission was fairly good. In regards to the attitude towards antenatal HIV screening, 90.8% of the mothers consented to be screened for HIV, citing reasons to avoid transmission to fetus as the main reason for agreeing for the test. Of patients who disagree for the test, the main reason was concern over the confidentiality issue. Although only 90.8% of respondents cited consent for the test, the total number of respondents who actually had the test performed was higher, $n = 647$ (99.5% of total respondents). Of these, only about half ($n = 336$) were actually aware of having the test done while a fifth ($n = 123$) remembered having had pre-test counselling.
Conclusion: There is much room for improvement in the way HIV counselling is done for antenatal mothers to increase their awareness of the issues related to HIV infection in pregnancy. There is a definite need for improvement in regards to the communication skills of the health providers in conducting the pre-test counselling and performing the test itself.

P1.051

Risk factors for reduced fetal movements in singleton pregnancies after 24 weeks

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Objective: (i) To outline the maternal demographics associated with reduced fetal movements. (ii) To assess understanding of reduced fetal movements. (iii) To identify the maternal and fetal risk factors for reduced fetal movements.
Methods: Retrospective data collection on all singleton pregnancies after 24 weeks who were admitted for reduced fetal movements in Kuala Lumpur Hospital between 1st January until 31st December 2010. Collectively, there were a total of 303 patients who were seen in the Patient Assessment Center (PAC) for reduced fetal movements. Dates were verified by using their last menstrual period (LMP) or 1st trimester scan. All mothers were given the fetal kick chart for documentation and to attend hospital if they felt <10 kicks in 12 h (between 9 am and 9 pm). The results would be analysed by statistical methods using Excel.
Results: The demographics of reduced fetal movements were more common among 27 years old, Malay ethnicity and multiparous women. Most women had tertiary education, employed with good socio-economic background. The average timing of complaints for reduced fetal movements were at 36 weeks of gestation. A total of 187 women had no first trimester scan and relied on LMP (last menstrual period) or symphysio-fundal height that corresponded to her dates. There were 54 women who had poor understanding of reduced fetal movements whereby it was actually reduced fetal kick strengths and not the quantity. Only 20 women had recurrent reduced fetal movement. Common maternal risk factors were obesity (BMI > 30 kg/m^2), anaemia (Hb < 8 gm/dL), gestational diabetes mellitus and pregnancy induced hypertension. One mother had hyperthyroidism and was on treatment. Only six mothers had a history of smoking or alcohol abuse while eight mothers had antepartum haemorrhage. Antenatal steroids were given to 22 mothers. Meanwhile, there were three fetal anomalies, seven growth restricted or small for gestational age fetus. Most fetuses were normal with appropriate growth. Oligohydramnios were seen in 33 mothers, polyhydramnios in three mothers but normal liquor volume predominated. One hundred and forty-three mothers had anterior upper segment placentas while three had placenta praevia. Only 10 mothers had previous history of stillbirth.
Conclusion: (i) There should be a clear definition of reduced fetal movements (quantity not strengths) and all health professionals should be aware of these to impart the appropriate information to pregnant women. (ii) Health professionals should identify risk factors for stillbirths in women with reduced fetal movements and carry out appropriate intervention.

P1.052

A Prospective review of booking haematological parameters in a multiracial developing country

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Objective: Race-specific criteria for anaemia had been once considered an important factor in population screening for anaemia. Previous studies have shown that there were significant differences in the booking haemoglobin levels amongst the races in Malaysia. Therefore, this study was aimed at quantifying the differences in the haematological parameters of booking primigravidas amongst the three major races of Malaysia – Malays, Chinese and Indians booked in the antenatal clinic of University Malaya Medical Centre, Kuala Lumpur, Malaysia.
Methods: A prospective review of primigravidas booking full blood count (FBC) parameters taken in one centre was compared

using a descriptive statistical analysis. The components of the FBC parameters analysed were haemoglobin (Hb), haematocrit (Hct), red blood cell (RBC), Mean Corpuscular Volume (MCV), Mean Corpuscular Hemoglobin Concentration (MCHC), mean corpuscular haemoglobin (MCH), red blood cell distribution width (RDW), white blood cell (WBC), and the platelet count.
Results: Five hundred and thirty-seven primigravidas without any known history of haematological disorders were recruited into the study. There were statistically significant differences (P-value <0.05) in the following booking hematological parameters (mean ± 95%CI): – RBC between the Chinese (4.03 ± 0.09 E12/L) and the Malays (4.20 ± 0.04 E12/L) P -value 0.002; the Chinese and the Indians (4.27 ± 0.08 E12/L) P-value 0.000 – MCV between the Chinese (90.12 ± 1.42 fL) and the Malays (85.60 ± 0.72 fL) P-value 0.000; the Chinese and the Indians (83.46 ± 1.43 fL) P-value 0.000; between the Indians and the Malays and Indians P-value 0.033 – MCH between the Chinese (30.10 ± 0.53 pg) and the Malays (28.53 ± 0.28 pg) P-value 0.000; the Chinese and the Indians (27.41 ± 0.60 pg) P-value 0.000; the Malays and the Indians P-value 0.001 – RDW between the Indians (15.64 ± 0.56%) and the Malays (14.31 ± 0.18%) P-value 0.000; the Indians and the Chinese (13.79 ± 0.24%) P-value 0.000.
Conclusions: There was no statistically significant difference in the booking Hb of the three major races in Malaysia found in this prospective review. However, this study did reveal that there were statistically significant variations in the RBC, MCV, MCH, and RDW amongst the races in Malaysia.

P1.053
Life-threatening acute pancreatitis and pseudocyst in pregnancy: a case report

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Background: Acute pancreatitis with pseudocyst formation is a potentially fatal condition that occurs in approximately one in 60 000 pregnancies.
Case report: A 37-year old woman, expecting her second baby, was admitted with hypertension at 28 weeks of gestation. She had had acute pancreatitis 9 years earlier in her one previous pregnancy. On that occasion, she had presented to a Polish hospital with a very puzzling clinical picture. This resulted in a surgical exploration and appendicectomy. Shortly after this, she developed acute gastric outlet obstruction. At the second laparotomy, a pancreatic pseudocyst was found and a diagnosis of acute pancreatitis secondary to hyperlipidemia was made. She recovered and went on to have a full-term normal delivery. In the current pregnancy, the initial investigations revealed hyponatremia, hyperlidemia and impaired glucose tolerance. She soon developed severe left flank pain, vomiting and oedema. Further laboratory data showed the picture of severe acute pancreatitis, with hypertriglyceridemia (4685 mg/dL), hypercholesterolemia (1374 mg/dL) and hyperamylasemia (638 IU/L). Her deteriorating clinical condition, which involved hypoxemia and very severe abdominal pain, required transfer to ICU at the general hospital. Imaging, including MRI, showed a large pancreatic pseudocyst. This was drained of 500 mL of turbid fluid by the radiology team. Early sepsis was treated with meropenem. Other interventions included naso-gastric feeding and the lipid-lowering agent, gemfibrozil. She recovered and was discharged from ICU after 13 days. The pregnancy was uneventful thereafter. She went on to have a normal vaginal delivery at 38 weeks of a healthy male weighing 2.4 kg. She was seen two, four and 6 weeks postnatally and was clinically well and her bloods had normalised.

P1.054
Study of compliance in obstetrics and gynaecology shifts handover

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Aims: (i) To assess the quality of the effective handover practice in Carlisle Infirmary Cumberland maternity department and to improve the service if necessary. (ii) To compare the handover practice with NHSLA guidelines.
Background: Handovers aim to convey high-quality and appropriate clinical information to oncoming healthcare professionals to allow for the safe transfer of responsibility for patients. Good handovers are essential in providing continuity of care and patient safety. Individual doctors have a responsibility for the assessment and continuing care of every patient admitted under their name until they are formally transferred to the care of another doctor and to ensure the formal handover of patients to an appropriate colleague following periods on duty. The introduction of full-shift working as a response to the progressive implementation of the European Working Time Directive (EWTD) has put the spotlight on patient and doctor safety. Effective handover between shifts is vital to protect patient safety and assist doctors with clinical governance. Good handovers also provide an excellent training and review opportunity, and these must be maximised in a climate of shortened hours and streamlined training. The purpose of NHSLA guideline is to ensure there are explicit and transparent lines of communication within the multi-disciplinary team to ensure optimum care for women. This handover must include details on the following, (SBAR) report tool for improving communication within the team.
Methods: Caldecott principle was sought and a retrospective study was performed. Proforma was used to collect information from handover sheets during the month of August 2011, $n = 62$. Data was then analysed by using Microsoft Excel.
Results: In the morning handover, the attendance rates of health professional staff are as follows: 84% of medical staffs, 81% lead midwife and 58% consultants. In the night handover, the attendance rates of health professional staff are as follows: 64% of medical staffs, 54% lead midwife and 35% consultants. Eighty-seven percent of the handover process used the SBAR tools correctly. The documentations given by 23 out of 31 (74%) midwives when transferring women from labour ward to postnatal ward met the requirements correctly.

Conclusion: Although 100% of medical staffs use the SBAR tools to aid the handover process, there is a poor attendance of consultants' presence and poor handover documentation performed by both medical and midwifery staff. As safe handover equates to safe care of patients, education of both the medical and midwifery staffs are the key to improvement.

P1.055
The decision for caesarean section in second stage labour – does consultant supervision on delivery suite make a difference?

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Introduction: The rate of caesarean sections (CS) at full dilatation is rising steadily. It is associated with maternal and neonatal risks. This rise in second stage CS is linked to a decline in the use of, or failed, instrumental deliveries. Currently, obstetric trainees perform most of the second stage trials of instrumental delivery in the UK. A recent UK study found that decisions made by consultant obstetricians are important in determining whether a second stage CS is the optimum method of delivery. This leads to the question of whether there is a benefit to having increased consultant presence on delivery suite, in order to optimise patient outcome, as well as to supervise and improve junior training.
Objective: To determine feto-maternal complications associated with 2nd stage CS. Also to evaluate the timing and the grade of the doctor making the decision for second stage CS, to evaluate whether more consultant presence is required on delivery suite.
Method: Retrospective, case note review looking at all second stage CS, at Darent Valley Hospital Kent, from 1st October 2010 to 31st February 2011.
Results: Total number of cases was 35. The main reason for CS in second stage was failure to progress. A trial of instrumental was only attempted in 40% cases. A consultant was directly involved in the decision making for the CS in only 29% cases, with consultant presence at the time of the decision in only 31% cases. With regards to maternal outcomes, 20% women required a blood transfusion, and reasons for prolonged hospital stay included bladder injury (6%), ITU admission (6%) and wound haematoma (3%). With regards to fetal outcomes, 94% babies had Apgar scores of 8 or more. Six percent babies needed admission to NNU, related to intra-partum fetal bradycardia.
Conclusion: In most cases of second stage CS, a trial of instrumental was not attempted. The main reasons for this included the head being too high or malposition. The decision for second stage CS was made by middle grade doctors in the majority of cases, with no consultant presence on delivery suite. The confidence of the junior obstetric registrar to attempt an instrumental or the accuracy of the examination findings remains questionable. This may result in a requirement for more junior training on instrumental deliveries and more direct senior supervision on delivery suite. Maternal complications (which prolong hospital stay) were infrequent. There were no associated neonatal complications.

P1.056
Sudden central chest pain mimicking aortic dissection in advanced pregnancy

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Acute chest pain in pregnancy may have varied etiology, from simple gastritis, to serious and life threatening conditions like pulmonary embolism, myocardial infarction and aortic dissection. We report a case of sudden onset central chest pain in a pregnant lady at 35 weeks of gestation who was admitted with symptomatic supraventricular tachycardia (SVT). A 29 year old primigravida was diagnosed to have supraventricular tachycardia 2 years prior to pregnancy and was started on Tab. verapamil. During pregnancy patient discontinued the medication and restarted at 25 weeks due to palpitations. Echo and holter monitoring was normal except for few premature beats. She was admitted at 35 weeks of gestation with reduced fetal movements for fetal surveillance. During admission, she developed severe retrosternal chest pain with no other associated symptoms. Urgent cardiology consultation was done with a suspicion of aortic dissection. ECG and troponin was normal. Gastro consultation was done as she had developed chest pain soon after food and it was getting worse. Urgent flexible esophagoscopy was arranged with a suspicion of food impaction. Endoscopy showed a bone like particle at the junction of upper and middle third of esophagus which got dislodged to stomach while trying to remove. Patient was relieved of symptoms after the removal of the impacted chicken bone. She had an uneventful elective caesarean section for lower uterine segment fibroid and was discharged in stable condition. With proper history and selective investigation, diagnosis of chest pain in pregnancy can be categorized to gastric, cardiac and pulmonary causes and then can be managed accordingly. Because of the broad range of presentations of gastrointestinal foreign bodies, a tiered approach is appropriate. Sharp foreign bodies should be removed endoscopically on an urgent basis because up to 35% of these sharp objects perforate the bowel wall if not removed.

P1.057
Working in maternity services, does it influence your personal choice in childbirth?

Samarasinghe, A; AlBaghdadi, O

Lister Hospital NHS Trust, United Kingdom

Introduction: A survey was conducted among staff involved in childbirth at Luton and Dunstable maternity unit to evaluate the influence, working environment and experience had towards personal childbirth preference. The idea started when a paediatrician requested to have an elective caesarean section (CS) for an uncomplicated pregnancy to avoid complications.
Objective: We surveyed staff preferences for childbirth: to assess the influence of working environment on attitudes toward mode, uncomplicated pregnancy, fetal macrosomia, breech, ECV and failure to progress at second stage due to mal-position. Next with the use of a scale, participants were advised to draw a line across

the scale, to indicate how much in percentages, knowledge and practise in maternity would affect decision-making and childbirth preferences.
Study design: An anonymous questionnaire was distributed to Maternity and SCBU staff from June 2010 to January 2011, included all grades of obstetricians, paediatricians, midwives, theatre staff, nurses, support-staff and students.
Results: One hundred and forty questionnaires were collected. Surveying 19% Obstetricians, 10% Paediatricians/SCBU, 16% theatre staff, 34% Midwives, 12% support-staff and 8% students. For mode of delivery, 4% chose elective CS in the absence of any clinical indication, 96% of staff opted for vaginal birth. Fifty-eight percent opted for elective CS when cephalic with EFW > 4.5 kg. Reasons were the fear of shoulder-dystocia and damage to baby. Those who opted for SVD, questioned whether EFW was completely reliable. In breech, 63% opted for elective CS with 30% willing for ECV. Of the 37% who wanted to try vaginal breech delivery, only 23% were willing for ECV. Regarding preferences in failure to progress, 51% opted for trial of instrumental delivery with 25.5% ventous, 9% forceps and 13.5% manual rotation. 48.5% declined trial for vaginal birth and chose CS. When looking at the influence of experience, staff felt experience at work impacted on average 76% on personal decision. In more details, 4% quoted >25%, 31% felt 25–75% and 60% figured >75% on the scale. When evaluating individual groups; 79% Obstetricians, 81% paediatricians, 73% theatre staff, 69%, midwives, 78% support-staff and 77% students.
Conclusion: We surveyed a diverse group of staff in a busy unit. Work experience and knowledge impacted heavily on personal decision-making and preferences towards different emergency situations. High scoring and preference for caesarean section was noticed among paediatricians and obstetricians. However, low scoring among support-staff and students could be attributed to less exposure.

P1.058
Vaginal delivery after caesarean section, do we practice what we preach?

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Lister Hospital NHS Trust, United Kingdom

Introduction: Many surveys evaluated midwives' and obstetricians' views toward vaginal delivery after caesarean section (VBAC). However there is limited research on maternity personals personal choice towards VBAC. Working environment and experience can affect all staff involved in childbirth.
Objective: We surveyed Maternity Unit staff childbirth preferences for themselves, or their partners, in order to evaluate the influence of working environment and personal birth experience had on the attitude toward VBAC and induction of labour (IOL) after CS.
Study design: An anonymous questionnaire was distributed to Maternity Unit and SCBU staff at Luton and Dunstable Hospital from June 2010 to January 2011, involved all grades of obstetricians, paediatricians, midwives, theatre staff, nurses, support staff and students.
Results: One hundred and forty questionnaires were collected. In relation to mode of delivery, 4% of staff chose elective CS in the absence of any clinical indication. Of those who chose CS, two of them have no childbirth experience, two had previous emergency CS and two had previous spontaneous vaginal delivery. In the scenario of VBAC, we found 84% opted for vaginal birth after CS (VABC). More than 50% of who declined VBAC were obstetricians and paediatricians. Of those who elected CS, the reason behind their choice were fear of damage to baby (12%), fear of perineal damage (12%) and to preserve sexual function (5%). The main reasons for VBAC were; to be as natural as possible (51%), to avoid long-term complications of CS (43%) and to avoid intervention (36%). Regarding induction of labour following previous uncomplicated CS, the choices were nearly equivalent, 54% declined IOL and 46% wanted IOL.
Conclusion: There is a current strong drive in maternity services to normalise labour and women are advised on the benefits of VBAC on a regular basis. Units are given initiative to reduce their CS rates. So do we practise what we preach? This survey clearly shows that a majority of maternity personnel are more than happy to attempt VBAC. However interesting we see that of those who wouldn't attempt VBAC a high proportion are obstetricians and paediatricians, arguably the same group who would have most knowledge on VBAC, its risks and benefits.

P1.059
Consent forms – are we ticking all the boxes?

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Introduction: Clinical governance and good practice explain that valid consent is essential to protect both patients and operators. Professionals must also ensure that a patient understands the procedure, prognosis, consequences, risks, alternative treatments and uncertainties.
Objective: To analyse the consistency and quality of consent forms. To ascertain if adequate information is been given to the patients to make an informed decision. Our standards were the RCOG procedure-specific consent forms with guidance that can be used for a limited number of procedures.
Methods: A retrospective audit, of 40 consent forms of women who underwent surgical procedures. Ten cases notes were looked at for each procedure; caesarean section (CS), 3rd/ 4th degree perineal tear repair, evacuation of retained products and diagnostic hysteroscopy, in 2011. This was a cross-site audit conducted at the Queen Elizabeth 11 and Lister hospital in Stevenage. The caesarean sections had a procedure specific consent form and the generic consent form was used for the rest.
Results: All consent forms had patient demographics, and a clear description of the intended procedure. All forms had intended benefits and the need for blood transfusion mentioned. However serious and frequent risks were separated in 0% of cases. One hundred percent of CS had extra-procedure stated while only 70% of tears did. In both hysteroscopy and ERPC, all patients were consented for uterine perforation, infection and bleeding but 0% were informed about risk to fertility. In hysteroscopy, failure of procedure was stated in 40%, while in ERPC damage to the cervix

mentioned in 20%. For perineal tears, incontinence was mentioned in 50%, haematoma 0%, failure to repair needing further intervention 30%, recto-vaginal fistula 0%. Difficulty in defecation 90%, suture migration 0%, faecal urgency 60%, dyspareunia 60%, and UTI 10%. For caesarean sections, all risks and complications were mentioned and clearly documented.
Conclusions: When using generic consent forms not all risks and information is given to the patient nor documented consistently Having a pre-filled procedure specific consent forms will insure that all risks and benefits are explained to the patient with clear separation between serious and frequently occurring risks. Moreover the consent form doubles as a take home advice leaflet.

P1.060
Factors influencing caesarean section infection rates

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Objective: Post caesarean section surgical site infection (SSI) is a major problem in Obstetrics, contributing to maternal morbidity, negatively impacting on patient experience and incurring significant cost to the healthcare provider. This study aims to identify the variable factors that may influence the caesarean section infection rate.
Methods: This was a retrospective case control study. In total 138 case notes were reviewed. Forty-two case notes of patients with post caesarean section infection and 96 case notes of patients without infection were randomly chosen over a 3 month period in the same hospital. For the purpose of the study patients with SSI were defined as those who presented following their caesarean section to a healthcare professional and were clinically diagnosed as having a SSI. Cases with SSI were identified from clinical coding. The study investigated a number of variables and any association with SSIs.
Results: A strong association was established between patients who had a high BMI and SSIs, with an ODDs ratio of 4.9 (95% CI 2.13–11.2). Another convincing association was between smoking and SSIs, with an ODDs ratio of 2.31 approaching significance (95% CI of 0.96–5.6). Association between those patients who had manual removal of placenta (MROP) and SSIs, with an ODDs ratio of 3.99 approaching significance (95% CI of 0.91–17.54) was noted. No significant association was established between steroids in pregnancy, previous caesarean sections, emergency versus elective caesarean sections, blood loss or the seniority of the surgeon operating.
Conclusion: This study is strongly suggestive of significant association between high BMI and post caesarean SSIs. Further research into the impact of targeted weight reduction programs to those awaiting elective caesarean sections and modifying post caesarean section wound care to those with high BMI may be beneficial. This study shows an association between smoking, and to a lesser extent MROP and post caesarean SSIs, though both were only approaching statistical significance. A larger study is warranted to establish this relationship conclusively. Future study into the impact of smoking cessation interventions on elective caesarean patients and the impact of giving a prolonged course of antibiotics following MROP in caesarean section (as routinely done in patients who have MROP per vaginam) may be beneficial. Overall, the association between modifiable factors and post Caesarean SSI is promising for future scope of reducing infection rate and improving patient outcome.

P1.061
A randomised controlled trial: cord traction with uterine massage versus cord traction alone as methods of placental removal during caesarean section

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Objective: To compare the effects of adding uterine massage to cord traction during the removal of placenta at Caesarean deliveries.
Methods: Women planned for caesarean section were randomly allocated into two groups, Group I were to undergo cord traction to deliver placenta and Group II were to undergo cord traction with external uterine massage to deliver placenta. Primary outcomes were intra-operative blood loss, changes in pre-operative and post-operative blood loss by full blood count.
Results: Four hundred patients were randomised, 200 patients with placental removal by control cord traction alone and another 200 patients with placenta removed using control cord traction with uterine massage. Significant improvement of blood loss was noted in cord traction with external uterine massage group. Mean blood loss in cord traction with external uterine massage was 415.5 mL and mean blood loss in cord traction alone was 484.4 mL ($P = 0.013$). The haemoglobin and haematocrit were also improved but not statistically significant.
Conclusion: Controlled cord traction with external uterine massage during Caesarean section was associated with significant reduction of operative blood loss.

P1.062
Antenatal corticosteroids: are we using them appropriately?

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Background: The Royal College of Obstetricians and Gynaecologists (RCOG) published a guideline in 2010 on 'Antenatal corticosteroids to reduce neonatal morbidity' (Green-top 7). Antenatal corticosteroids are effective in reducing respiratory distress syndrome (RDS) and intraventricular haemorrhage (IVH). There is also an associated decrease in the neonatal mortality rate. A course of antenatal corticosteroids is defined as two doses of Betamethasone 12 mg IM 24 h apart OR four doses of Dexamethasone 6 mg IM at 12 hourly intervals.

Antenatal corticosteroids are most effective in reducing RDS in pregnancies that deliver between 24 h and 7 days after administration of the second dose of steroids. Suitable candidates to receive antenatal corticosteroid therapy include all women at risk of iatrogenic or spontaneous preterm birth up to 34 + 6 weeks, who are planned for an elective caesarean section prior to 38 + 6 weeks, with a multiple pregnancy who are at risk of imminent iatrogenic or spontaneous preterm delivery between 24 + 0 and 34 + 6 weeks and with fetal growth restriction between 24 + 0 and 35 + 6 weeks. We conducted an audit within our trust to assess our practice relating to administration of antenatal corticosteroids.

Results: The results showed that the majority of patients who were multiparous, received dexamethasone due to a shortage of betamethasone and completed the steroid course prior to delivery. Varying indications for administering corticosteroids were identified; the most common being antepartum haemorrhage, tightenings, premature rupture of membranes and positive fibronectin and actim partus tests. There were also unusual indications such as patient request. Steroids were given to a small number patients with negative fibronectin tests. The range of gestation for administration of corticosteroids was 24–38 weeks. A senior trainee or consultant made all decisions about administration of steroids. There was a wide range in time to delivery following administration from 8 h to 8 weeks. Repeat courses of steroids were given to some patients. In some women whom a fibronectin test was contraindicated due to antepartum haemorrhage, an actim partus test should have been performed and this was not done. Overall the practice was good in the unit. There were some deviations from guidelines in the timing, frequency and dosage of corticosteroids, the indication for them and use of fibronectin and actim partus testing.

P1.063
Audit on psychiatric disorders during pregnancy – our experience from a large district hospital

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Introduction: The UK Confidential Enquiry into Maternal Deaths (CEMD) reports that psychiatric disorders contributed to 12% of all maternal deaths. Suicide is the second leading cause of maternal death in the UK after cardiovascular disease. Up to 15% of mothers experience mild to moderate depression, while up to 5% will develop severe conditions such as psychosis and anxiety disorders. Delay in delivering adequate treatment for postnatal depression or puerperal psychosis is particularly unfortunate since the response to treatment is good. Effective detection and adequate management of these disorders requires co-ordination of a wide variety of primary and secondary care services.

Objective: To identify the ways to improve the identification, detection and care of women who have perinatal mental health problems, whilst pregnant and during postnatal period and to ensure that we are complaint with NICE guidelines.

Methods: It was a retrospective study. Data was analysed from December 2010 to December 2011. Only pregnant women with history of severe mental illness like bipolar disorder, schizophrenia or previous history of psychosis were included.

Results: From our study we have identified seven patients. And all achieved vaginal deliveries. Out of which two were admitted to mother and baby unit after delivery. Ninety-five percent of women had experience of domestic abuse, alcohol and drug abuse. We were able to meet 98% standards for antenatal care but only 60%for postnatal care.

Conclusion: The NICE Antenatal and Postnatal Mental Health Guidelines (2007) have stressed the importance of recognising perinatal mental illness. Reports have suggested that a greater knowledge and understanding of perinatal mental illnesses, and postnatal depression in particular, is needed. We strongly recommend that education about maternal health should be part of all health care training. Effective care can best be delivered when there is good communication, information sharing and joint working between all professionals involved in caring for childbearing women.

P1.064
Shoulder dystocia – a prospective observational study

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Objective: This is a prospective observational study designed to review the incidence of shoulder dystocia (SD) at our centre. Risk factors for SD, the maneouvres used to relieve SD, the seniority of the accoucher, the interval between delivery of foetal head and trunk and its implication on maternal and perinatal outcome were assessed.

Methods: Records of all cases of shoulder dystocia for a 1 year period, following incident reporting occurring between 1st January and 31st December 2011 were reviewed and recorded using SPSS Version 19.0.

Results: Preliminary data analysis revealed a total of 43 cases (0.33%) of shoulder dystocia over a year period among 12 812 deliveries. The average age was 29.7 years and the rate was highest amongst Indians (0.36%) followed by Malays (0.33%) and chinese (0.25%). Of the total SD cases, 11 were diabetics including gestational diabetics (25.6%). Fifty-eight percent had a spontaneous vertex delivery while others had an instrumental delivery. Seventy-nine percent cases required Mc Robert's manoeuvres with suprapubic pressure (external manoeuvres) to relieve shoulder dystocia ($P < 0.01$). The average birthweight was 3.63 kg, with only seven cases weighing 4 kg or more (16.3%). There were only three cases of postpartum haemorrhage (6.98%). Seven babies (16.2%) were delivered with low apgar score (AS) requiring neonatal intensive care, out of these seven babies, five of them were required further internal rotational manoeuvres. There was one early neonatal death. Delivery of fetal head to trunk, had a mean time interval of 3.1 min. Of the seven low AS babies, only one case had a birthweight of more than 4 kg (4.1 kg) and four of

these cases had time interval more than 3.1 min. There were two cases (4.6%) of brachial plexus injury and two cases (4.6%) of fractured humerus.
Conclusion: Majority of cases with shoulder dystocia weighed <4 kg. Our data shows that the rate of shoulder dystocia is higher in the non-diabetic group. Mc Robert's with Suprapubic pressure were shown effective in relieving shoulder dystocia, thus supporting its use as a first line manoeuvre. An interval time of 3 min or less was proven to improve perinatal outcome ($P < 0.01$).

P1.065
Observational study of acquired heart disease in pregnancy – assesing the maternal and perinatal outcome in Hospital Sultanah Aminah, Johor Bahru

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Objective: To assess the maternal and perinatal outcome in patients with acquired heart disease.
Methods: Prospective observational study in 89 pregnant women diagnosed with having acquired heart disease for 1 year duration managed by both an obstetrician and a cardiologist. Patients were monitored throughout their pregnancy and their outcomes, cardiac event, mode of delivery, intrapartum event and perinatal outcome were observed.
Results: The mean age for the patients included was 30.5 and they had a normal BMI with a mean of 23. Out of the 89 patients, 71 of them had chronic rheumatic heart disease, eight had mitral valve prolapse with mitral regurgitation, five had arrhythmias and four patients had non-peripartum cardiomyopathy and one patient with ischemic heart disease. Out of all this patients, 13 of them had a history of heart surgery before where seven of them went for a valve replacement, one of them had a bypass surgery for triple vessel disease. Fifty patients (56.2%) had spontaneous vertex deliveries, 27 patients had caeserian sections (12 elective, 14 emergencies) and the remaining had an instrumental delivery. The mean gestation age upon delivery was 37.69%. Five patients (5.6%) had a cardiac event where they developed heart failure; three during antepartum and two postpartum. There was one maternal mortality from the chronic rheumatic heart disease during postpartum. Postpartum haemorrhage occurred in six patients (6.7%) and out of this, four of them required transfusion. For patients who were on anticoagulant, non of their deliveries were complicated with postpartum haemorrhage. As for the perinatal outcome, 14 of the babies required admission to NICU and five of these admissions were due to prematurity. There was only one case noted to have ventriculomegaly secondary to warfarin treatment. The mean Apgar score was 8.8 and the mean birthweight achieved was 2.9 kg. There was a stillbirth in a patient with CRHD (MSB).
Conclusion: Patients with acquired heart disease in pregnancy is able to have a good pregnancy and perinatal outcome if they are followed up well under a multidisciplinary team involving the cardiologist and obstetrician. They are able to reach term with few complications and majority have successful vaginal deliveries.

P1.066
Perinatal mortality and associated risk factors at Lagos University Teaching Hospital

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This study was aimed at determining the risk factors associated with the high perinatal mortality rate (PMR) in Nigeria using data from Lagos University Teaching Hospital (LUTH). There were one hundred and seventy-one (171) perinatal deaths; 66 macerated stillbirths, 43 fresh stillbirths and 62 early neonatal deaths, hence perinatal mortality rate of 48.9/1000 births which is high compared with developed countries. Leading causes were antenatal and intrapartum complications resulting in the delivery of premature, low birthweight or asphyxiated babies; pre-eclampsia, antepartum haemorrhage, preterm labour, premature rupture of membrane and prolonged obstructed labour. PMR was 28 times higher in unbooked patients compared to LUTH booked patients. Obstetric services should be accessible to all women. Professional bodies like the Society of Obstetricians and Gynaecologists of Nigeria (SOGON) should make available management protocols to guide practice especially in the peripheral care centres.
Methods: Case records of 4000 of the 5904 deliveries in LUTH between 1st January 2002 and 31st December 2006 selected randomly were reviewed. Multiple deliveries and incomplete records were excluded to comply with international standardization. Three thousand, four hundred and ninety-seven (3497) singleton deliveries available for final analysis were analysed using Epi6 statistical software and associations evaluated using 2 by 2 tables, the odds ratios and 95% confidence interval.
Results: PMR was significantly higher in the unbooked group (Odds ratio (OR) 28.47, 95% CI.19.88–40.84) and grandmultiparas (OR, 5.92, CI 3.24–10.58) PMR was significantly higher in fetuses with birthweight <2.5 or >4.0 kg (OR, 11.91 CI 8.45–16.92) and (OR 1.94, CI 1.12–2.99) respectively. It was higher in pregnancies complicated with Preclampsia (OR, 31.30, CI 11.73–65.07), Antepartum haemorrhage (OR, 18.25, CI 8.92–37.23), Obstructed labour (OR, 24.33, CI 11.82–50.22), Prolonged rupture of membrane (OR, 11.33, CI 5.64–22.54), Intrauterine growth restriction (OR, 11.41, CI 4.82–58.73), Sickle cell disease (OR, 6.10, CI 1.66–20.34), and gestational diabetes (OR, 7.08, CI 2.46–19.37).
Conclusion: Relevant professional bodies like SOGON should make available management protocols to guide obstetric practice.

P1.067

Diagnosis of labour: the II prospective clinical study

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Objective: Currently there are few studies that may clearly establish scientific criteria for diagnosis of labour. In this way we conducted a second perspective cohort study to analyse which clinical factors are scientifically related to diagnosis of labour.
Methods: The study was conducted between June 2009 and August 2010. We considered each woman with physiological singleton pregnancy at term of gestation (37–42 weeks) came to our hospitals for one of these: contractile activity, premature rupture of membrane, blood loss. During the acceptance the doctor in charge filled in a schedule where he reported the results of the obstetric visit and the history of the patient. The woman could be admissed or could be sent home. Subsequently a reasearcher was responsible to sign the time of delivery. On the whole, we have collected 737 cases; among these, we have selected the ones (411 cases) whose first labour diagnosis proved to be right.
Results: Univariate statistical elaboration of data shows that: in the multiparous group anamnestic parameters are not statistically significant for diagnosis of labour, while cervical shortening and cervical dilatation over 3 cm are statistically significant (respectively: *P*: 0.0029, RR 1.158; *P*: 0.0098, RR 1.224). In the nulliparous group both anamnestic and clinical parameters are statistically significant: increasing frequency of contractions (*P*: 0.0298; RR: 1.238); increasing intensity of contractions (*P*: 0.0157; RR: 0.419); Cervical shortening (*P*: 0.0002: RR: 1.289); cervical dilatation over 3 cm (*P*: 0.0008; RR:1.352); cervical consistency (*P*: 0.0013; RR: 1.487). Pain localization has no statistical significance neither for nulliparous nor multiparous women.
Conclusions: Wrong diagnosis of labour interests more than the 10% of women at term of their pregnancy. This can lead to inadeguate management of labour and also to inadeguate monitoring and fetal suffereance. Moreover a correct diagnosis of labour can reduce the number of caesarean sections and instrumental delivery rate. Today the definition of diagnosis of labour isn't supported by scientific data. Each author has his own conviction. Our study is a deepening of a previous cohort study, made to establish which factors are certainly related to the diagnosis of labour. Data analysis shows that: for nulliparous women both anamnestic and clinical parameters are statistically significant for diagnosis of labour; for multiparous women anamnestic parameters aren't statistically significant for diagnosis.

P1.068

Prenatal detection of major congenital cardiac abnormalities: do we really need fetal echocardiography?

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Objective: To review the ability to predict major congenital heart defects (CHD) by prenatal ultrasonography and the validity of routine ultrasonography in a Fetal Medicine Unit (FMU) without fetal echocardiography.
Methods: All newborns diagnosed with CHD at Corniche Hospital Abu Dhabi between 1st January 2010 and 31st December 2010 were identified from the NICU admission register. Data was analyzed from maternal and neonatal records, as well as the ultrasound scan reports. We categorized minor CHD as patent ductus arteriosus (PDA) and small ventricular septal defects (VSD); undetectable CHD as atrial septal defect (ASD); and the rest were considered major CHD.
Results: There were a total of 64 babies with CHD. The overall incidence of congenital heart defects was 6.5 per 1000 live births. Twenty one babies were excluded from further analysis (five from mothers with antenatal care elsewhere, 11 with PDA, five with initial diagnosis made by the Neonatologists but unconfirmed by pediatric cardiologists). Of the 43 cases analyzed, major CHD was diagnosed in 22 cases, minor CHD seen in 14 cases and seven were considered undetectable prenatally (secondum ASD, peripheral pulmonary stenosis). Twenty two cases (51%) were in UAE nationals, 28% ($n = 12$) were Arabs, 9% ($n = 4$) Asians and 12% ($n = 5$) African origin. Only 16% of the couples were consanguineous. Ten mothers had diabetes during their pregnancies of which only two were on insulin. Twelve cases (27%) were associated with chromosomal abnormality (T21:9, T18:2, T13:1) and two were associated with genetic syndromes (Pompe's disease and Prader Willi syndrome). The prenatal detection rate for major CHD was 68.2%. Of the 22 major cardiac defects, 15 were diagnosed prenatally and seven were missed. In terms of gestations at the time of scan, 36% ($n = 8$) had an ultrasound between 18 and 24 weeks, 64% ($n = 14$) were in the third trimester and only one had a nuchal translucency scan. All major abnormalities that were seen in the FMU were diagnosed antenatally.
Conclusion: This study highlights the potential role of the FMU in providing adequate prenatal assessment of the fetal heart to exclude major CHD in units where fetal echocardiography done by Pediatric Cardiologists are not freely available. From our study we believe early booking, nuchal translucency screening and optimizing the gestation of routine anomaly scans may further increase the prenatal detection of CHD.

P1.069

A case of spontaneous concieved twins in uterus didelhpys, with induction and delayed delivery between twins

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Objective: This is a case report of a woman who presented with a twin pregnancy in each half of a uterus didelphys.
Case: This is a unique case in several ways: the patient had a previous caesarean section, uterus didelphys spontaneously conceived twins who delivered vaginally, with a 23 day interval between the first and second delivery. In addition she had an induction of labour for the second twin. It is an unusual case with very little evidence to guide management.
Conclusion: We reviewed some of the cases and evidence available to help guide similar cases in future. We conclude induction of labour and vaginal delivery may be considered in uterus didelphys and twins with previous caesarean section.

P1.070

Evaluation of healthcare professionals' understanding of eponymous manoeuvres and mnemonics in emergency obstetric care provision

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Objective: Shoulder dystocia, vaginal breech delivery and uterine inversion are emergencies that obstetricians and midwives are taught to manage using numerous eponyms. Because of the inherent difficulty in remembering eponyms and the cascade of procedures, mnemonics have been devised to aid memory. In this study we aim to evaluate whether eponyms and mnemonics are remembered, understood and applied by qualified doctors and midwives of all levels.
Methods: An anonymous questionnaire was devised collecting demographic data and information about the knowledge and clinical use of HELPERR and PALE SISTER mnemonics for shoulder dystocia. In addition, three extended matching questions (EMQ) evaluated participants' knowledge of the correct manoeuvres used in shoulder dystocia, vaginal breech delivery and the management of uterine inversion. They were also asked to match the correct manoeuvres with the corresponding eponym. The questionnaires were distributed at King's College and Croydon University Hospitals London to qualified doctors and midwifes who are currently practicing in obstetrics. The participants were asked to complete the questionnaire without the use of references to aid them or conferring with colleagues. These were marked and the scores logged into excel and analyzed. A two tailed Fisher's exact test was used to compare results between groups.
Results: Ninety questionnaires were collected; 37 by doctors and 53 by midwives. Eighty-eight percent stated that they were familiar with the HELPERR mnemonic with 79% saying they used it in their practice. Of those who used it in their practice only 30% could correctly identify what all the letters stood for ($P < 0.0001$). PALE SISTER was only familiar to five people with only one correctly identifying what the letters stood for. The percentage of correct responses of manoeuvres for managing shoulder dystocia was 83%. However, only 27% correctly matched the eponyms ($P < 0.0001$). The percentage of correct responses of manoeuvres for managing breech was 59%. However, only 24% correctly matched the eponyms ($P < 0.0001$). The percentage of correct responses of manoeuvres for managing uterine inversion was 37%. However only 7% correctly matched the eponyms ($P < 0.0001$).
Conclusions: Our results highlight that despite remembering the mnemonics, their meanings were frequently remembered incorrectly therefore limiting their usefulness. This finding, together with the poor correlation between the knowledge of emergency manoeuvres and their eponyms, suggest that perhaps future teaching should focus on learning manoeuvres rather than concentrating on mnemonics and eponyms.

P1.071

Predictive factors of abnormal glucose tolerance at 6 weeks postpartum in women with gestational diabetes in HUSM, Kelantan

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Objective: To evaluate the prevalence of abnormal glucose tolerance in 101 Kelantanist women with grestational diabetes (GDM) at 6 weeks postpartum and identified risk factors for the development of abnormal glucose tolerance.
Methods: All women had 75 g OGTT and the following data were collected: age, race, gravida, occupation, educational level, pre pregnancy BMI and family history of DM, HBA1C at diagnosis of GDM, insulin therapy, previous history of GDM.
Results: 39.6% of women had abnormal glucose tolerance, including 35.64% of IGT and 3.96% of DM. One of the pre pregnancy variables; working status as teacher ($P = 0.001$) was a predictor for the abnormal OGTT. In contrast, pregnancy related risk factors, like HBA1c at the time of GDM diagnosis ($P = 0.038$), insulin therapy ($P = 0.004$), previous history of GDM ($P = 0.009$) and gestational week at diagnosis of GDM ($P = 0.026$) were significantly associated with the persistence of glucose intolerance after delivery.
Conclusion: The prevalence of abnormal glucose tolerance at 6 weeks postpartum was 39.6% and was associated with working status as a teacher, HBA1c at the time of GDM diagnosis, insulin therapy, previous history of GDM and gestational week at diagnosis of GDM. The diagnosis of abnormal glucose tolerance at postpartum should therefore initite a lifelong monitoring of glucose tolerance to minimize the risk of diabetes and to prevent the possible complications that might arise from diabetes.

P1.072
Gitelman syndrome in pregnancy
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Introduction: Gitelman syndrome is an autosomal recessive disorder, with an estimated prevalence of 1:40 000 people. Its clinical presentation is classically muscle weakness or cramps, with hypochloraemic metabolic alkalosis, hypokalaemia and hypogcalciuria. Hypomagnesaemia may also be present.
Objectives: To present a case series on two sisters' pregnancies and successful outcomes. Detailing particularly their antenatal counselling (including genetics), intrapartum and postpartum care, and the challenges faced by this disease.
Methods: A retrospective review of patients' notes, and an online search for information on Gitelman syndrome, and its effects in pregnancy.
Discussion: Gitelman syndrome is an autosomal recessive condition and therefore there are immediate issues regarding counselling of couples. There are also particular considerations in antenatal care regarding potassium, calcium and magnesium levels in view of the physiological changes in pregnancy. This is the main challenge during the intrapartum period, where patients can become dehydrated, and require energy for the physical exertion of delivery.

P1.073
The path from external cephalic version to vaginal delivery – how many does it take?
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Objective: External cephalic version (ECV) is advocated for pregnant women with breech presentation at term in order to facilitate a safe vaginal delivery. Despite ECV, a significant proportion of women will still require lower segment caesarean section (LSCS). We sought to determine the number of ECV required to achieve a vaginal delivery in a multi-centred study.
Methods: A large retrospective cohort study was conducted on all ECV performed on women who delivered between 1st January 2006 to 31st December 2011 in two London hospitals. Subjects were identified using hospital admission coding for ECV and data extracted from EuroKing electronic maternity records in the first hospital, and obtained from Ciconia Maternity Information System (CMiS) in the second hospital. Subject demographics, pregnancy and labour details were entered into Microsoft Excel for analysis.
Results: During the 6 year period, 93 and 140 ECV were performed in the two hospitals. Four cases were excluded as two had insufficient data, one had ECV for 2nd twin, and one being the 2nd ECV attempt for a woman. A total of 229 cases were analysed. In the 229 ECV, 153 (66.8%) remained non-cephalic including one transverse, and 76 (33.2%) became cephalic. Of the unsuccessful ECV, 13 (8.5%) became cephalic at delivery in whom six had elective and six emergency LSCS; only one achieved a normal vaginal delivery. In those that remained breech, 110 (71.9%) had elective LSCS, 28 (18.3%) emergency LSCS and 2 (1.3%) breech vaginal delivery. The vaginal delivery rate was 2.0%. Conversely, 6 (7.9%) successful ECV reverted to breech presentation at delivery in whom two had elective and three had emergency LSCS; one presented in labour and had a breech vaginal delivery. In those that remained cephalic at delivery, 3 (3.9%) had elective and 16 (21.0%) had emergency LSCS. The rest of the 51 (67.1%) achieved vaginal delivery including four ventouses and two forceps deliveries. The vaginal delivery rate was 68.4%. Overall, in the 229 ECV, 174 (76.0%) had a LSCS while only 55 (24.0%) achieved a vaginal delivery, including three breech vaginal delivery. The number of ECV required to achieve a vaginal delivery was 4.2.
Conclusions: About one in three ECV were successful. Although successful ECV was more likely to have a vaginal delivery, one in three will still require LSCS. Overall the number needed to treat to achieve a vaginal delivery for breech presentation was 4.2.

P1.074
Obstetric haemorrhage in pregnancies with inherited bleeding disorders
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Background: Previous studies have shown that pregnant women with inherited bleeding disorders (IBD) and carriers, have a higher risk of obstetric haemorrhage when compared to normal pregnant women. However, with expert multidisciplinary approach to the care of these pregnancies, adherence to the national guidelines for the management of IBD in pregnancy produced by the UK Haemophilia Centre Doctors' Organization, and provision of individualised birth plans, it may be possible to achieve normal pregnancy outcomes.
Methods: We followed up pregnancy outcomes of women with IBD, and carriers, who delivered at the Royal London Hospital Obstetric unit with a large Haemophilia Comprehensive Care Centre, from September 2008 until January 2012. The incidence of obstetric haemorrhage was compared to a control group of 450 pregnancies without IBD, who delivered at this unit in November 2010.
Results: There were 33 pregnancies including vonWillebrand's (vWD) type2 (8), Factor XI deficiency (6), Haemophilia A carriers (5), Haemophilia B carriers (3), Factor VII deficiency (3), platelet disorders (3), vWD type1 (3) and Factor XIII deficiency carriers (2). Twenty-one women had peri-delivery haemostatic treatment. Primary postpartum haemorrhage (PPH) occurred in five women (15.2%) but none required blood transfusion. However, four out of five of these women had caesarean sections. Secondary PPH occurred in one woman (3%). In women with IBD or carriers, the average estimated blood loss (EBL) for vaginal birth was 200 mL (Interquartile range (IQR) 150–300 mL) while the average EBL for Caesarean section was 450 mL (IQR 300–700 mL). This was not statistically significantly different from the control group, where the average EBL was 250 mL (IQR 200–350 mL) and 500 mL (IQR 400–700 mL) respectively. None in the control group had

secondary PPH. Neonatal outcomes: In women with IBD or carriers, there was one preterm birth (3%) and four 'small-for-gestational-age' babies (12%) but all had normal Apgar scores and did not require additional neonatal care. Six babies were diagnosed with IBD (18%) including three with vWD type2, two with Factor XI deficiency and one severe Haemophilia A. One baby with type2A vWD had cephalhematoma following a normal vaginal delivery.

Conclusion: With the exception of a secondary PPH and a cephalhematoma in a pregnancy with type 2A vWD, women with IBD or carriers had similar rates of primary PPH and neonatal outcomes as normal women. It is therefore essential that pregnancies associated with IBD are managed via an expert multidisciplinary team approach.

P1.075
Three years study of perinatal mortality in a district general hospital, UK

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Objective: To analyse the main causes and associated conditions in perinatal mortality and to identify the avoidable factors and areas of improvement.

Methods: A retrospective audit of perinatal deaths between January 2009 and December 2011. Inclusion criteria were stillbirths and early neonatal deaths after 24 weeks of completed gestation (birthweight >500 g). Data collection was from obstetrics risk management register. Data analysed includes maternal and gestational age, maternal risk factors, antenatal and intrapartum care, weight and sex of baby and postmortem reports. The causes of deaths were ascertained using Relevant Condition at Death System (ReCoDe). This classification reduces the category of unexplained stillbirths.

Results: During the study period, total births were 12 535 with 54 perinatal deaths; stillbirths 44 cases (antepartum 39 and intrapartum 5); early neonatal deaths, 10 cases. The perinatal mortality rate was 4.3 per 1000 total births. Adjusted perinatal mortality was 3.27 per 1000 total births corrected for lethal congenital anomalies in 13 cases. Each group of maternal age below 20 years and above 40 years had five cases (9.26%). Post-mortems were performed in 18 cases (34%). Causes of deaths were analysed according to ReCoDe classification system. Group A: Fetus, 31 cases (57.4%), Fetal growth restriction in 25 cases (46.3%) that includes 13 cases of lethal congenital anomalies. Group B: Umbilical Cord, four cases (7.4%), consisting of two cases of cord prolapse and two cases of constricting knots. Group C; Placenta, four cases (7.4%), Placental abruption in two cases and placental insufficiency in two cases. Group D: Amniotic fluid, two cases of chorioamnionitis. Group F: Mother, four cases (7.4%), diabetic in 3, and one case of essential hypertension. Group G: Intrapartum, five cases (9.25%). Group I: Unclassified, seven cases (12.96%). Reduced fetal movements reported in 19 cases (35%).

Conclusion: Our perinatal mortality rate was 4.3 per 1000 total births against United Kingdom average of 7.6 per 1000 total births. Antenatal education regarding normal and reduced fetal movements have been implemented. Women reporting reduced fetal movements have a care pathway of management. Intrapartum stillbirths due to poor cardiotocography interpretation has been rectified by regular teaching and correct classification using NICE guidelines. Postmortem study identified causes of deaths in 10 cases. Antenatal identification of growth restricted fetus, monitoring and timely intervention are essential to prevent stillbirth.

P1.076
Perinatal outcomes of women in the Tokyo metropolitan area who received inadequate prenatal care: a case-control study

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Objective: Prenatal care is important for the health of pregnant women and their babies. The purpose of this study was to investigate the individual characteristics and perinatal outcomes of women in the Tokyo metropolitan area who received inadequate prenatal care.

Methods: This was a retrospective case-control study in the Tokyo metropolitan area. Women with only 1–5 prenatal care visits (low attenders: $n = 64$), women who did not attend prenatal care (non-attenders: $n = 47$) and control women who initiated prenatal care prior to 11 weeks of gestation ($n = 1787$) participated in the study at the National Center for Global Health and Medicine between January 1 2007 and June 30 2011. The maternal characteristics and perinatal outcomes of low attenders and non-attenders were compared with those of the control group.

Results: Low attenders had a higher incidence of younger age, unmarried status and *Chlamydia trachomatis* infection compared with the control group ($P < 0.0001$). There were no differences in the incidence of preterm delivery, the mode of delivery or the incidence of low birthweight; however, the babies of the low attenders had a higher incidence of admission to the neonatal intensive care unit compared with the babies of women in the control group ($P < 0.0001$). Non-attenders had a higher incidence of younger age, unmarried status, *Chlamydia trachomatis* infection and syphilis compared with the control group ($P < 0.0001$). Non-attenders had a higher incidence of pregnancy-induced hypertension compared with the control group ($P = 0.02$). There were no differences in the incidence of each mode of delivery; however, non-attenders had a higher incidence of preterm delivery, low birthweight and delivery outside of a hospital compared with the control group ($P < 0.0001$). The babies of the non-attenders had a higher incidence of admission to the neonatal intensive care unit and admission to the orphanage compared with rates in the control group ($P < 0.0001$).

Conclusions: The maternal demographic characteristics are important factors associated with inadequate prenatal care in the Tokyo metropolitan area. This study demonstrated that inadequate prenatal care was associated with the risk of adverse pregnancy outcomes. Our results indicate that there is a pressing need for further steps to provide access to prenatal care and to shift the focus from a generalised to an individualised approach to care for women with risk factors.

P1.077
Uncommon becoming common – Bell's palsy in pregnancy

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Incidence of Bell's palsy is reported to be 50 per 100 000 pregnancies. We report two cases of Bell's palsy seen within a month in our busy district general.
Case 1: Forty years old Caucasian primigravida presented at 39 weeks of gestation with sudden onset of right sided facial weakness and numbness. Examination revealed loss of wrinkles on forehead, deviation of lip towards left side and excessive lacrimation in the right eye owing to non-closure of the eye. She was reviewed by the medics who confirmed Bell's palsy and started on a course of steroids. Post admission, the blood pressure was labile with urine showing 1+ protein and labetalol was started. Liver function and renal function tests were normal except for elevated urates. Induction of labour was organized 4 days later for pre-eclampsia. A day later, she delivered a 3.2 kg baby with good APGARS and cord gases.
Case 2: Twenty-six year old Asian lady in her second pregnancy was admitted at 37 weeks of gestation with spontaneous rupture of membranes and early labour. She was noted to have Bell's palsy and was on steroids started by her general practitioner 8 days before. She had a normal vaginal delivery. Postnatally she developed pre-eclampsia with elevated blood pressure and impaired liver and renal function tests. Her blood pressure stabilized on labetalol 100 mg three times a day an she was discharged home on the third postnatal day.
Discussion: Our hospital has 15 senior obstetricians and 4000 deliveries per year. If we consider the reported incidence of 45.1/100 000 pregnancies, on an average, an obstetrician in our hospital might see a case of Bell's palsy once in 7 years. Hence management could be challenging. Appropriate recognition, involvement of medics and steroid cover are the essential steps in treating a woman with Bell's palsy. The very pathogenesis of extracellular oedema predisposing to Bell's palsy is shared by preeclampsia as well. Hence there is a strong association between the two with 22% of women with Bell's palsy developing preeclampsia in pregnancy. So any woman presenting with Bell's palsy has to be actively screened for pre-eclampsia.
Conclusion: Every obstetrician should be aware of this rather uncommon neurological complication. Often pregnant women with any medical concern consult the obstetricians first and we must be able to recognize Bell's palsy, initiate steroid cover and mount.

P1.078
Timing of elective caesarean section: a tricky balance

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Objective: Elective caesarean sections are becoming increasingly common and have a significant impact on the public healthcare system. The timing of an elective caesarean section is very important, with electives having to be performed as emergencies having considerable consequences. We investigated the gestation, indication and outcome of elective caesarean sections performed as emergencies in a large inner city hospital in Kuala Lumpur.
Methods: Data validated from the Hospital Kuala Lumpur's Obstetrics Statistics Department was used to indentify elective caesarean sections that had to be performed as emergencies over a 12 month period in 2011.
Results: Seventy-three of the 824 elective caesarean sections had to be performed as emergencies. Fourteen of the patients were primiparous. The mean gestation when the elective caesarean section was due to be performed was 38 weeks and 4 days. The indication for the 73 elective caesarean sections included 22 two previous scars, 14 breech and nine maternal request following one previous scar. The mean gestation when the emergency caesarean section was performed was 37 weeks and 6 days. The indication for the emergency caesarean section was onset of labour in 86.3%. Fifty-six of the 75 babies (two sets of twins) were born with Apgar scores of 9 and 10. Four babies required admission to the neonatal intensive care unit while 27% or 36% of the babies required admission to the special care baby unit. The mean birthweight of the 75 babies was 3059 g. The average blood loss was 328 mL. The only intra-operative complication was postpartum haemorrhage and this occurred in three cases.
Conclusion: The timing of elective caesarean sections is a difficult balance. Performing planned caesarean sections as emergencies is associated with potential increased risk of intraoperative complications, mothers reporting more negative delivery experiences which could contribute to increased post-delivery stress and also an increased workload on emergency teams. However, the association of respiratory morbidity and elective caesarean sections performed before 39 weeks of gestation is extensively documented. Lastly, the administration of antenatal steroids to all patients undergoing elective deliveries before 39 weeks of gestation as recommended by the Royal College of Obstetricians and Gynaecologists (RCOG) needs to be strongly considered.

P1.079

Evaluation of the antenatal care and obstetric outcome of obese pregnant women and those with a healthy BMI at a district general hospital in the UK

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Objective: To compare the antenatal care and obstetric outcome of mothers with a healthy BMI (20–25) to women with a raised BMI (30–35). The study also compares Royal College of Obstetricians and Gynaecologists (RCOG), Clinical Negligene Scheme for Trusts (CNST) and National Institute of Clinical Excellence (NICE) guidelines with current practice at GWH to see if improvements can be made.
Background: The UK is witnessing an ever-increasing rise in the number of obese pregnant women. Obesity is the most commonly occurring risk factor in obstetric practice and is linked to an increased risk of antenatal, intrapartum and postnatal complications. It is vital that GWH maternity service develops robust processes to manage these risks to provide optimal care.
Methods: One hundred and fifty notes of women who delivered in January 2011 were recruited. Those within BMI ranges 2025 and 3035 were selected for scrutiny. Data was collected on maternal age, smoking status, antenatal complications (hypertension, anaemia, urinaty tract infections) glucose tolerance testing (GTT), nutritional supplementation, venous thromboembolic (VTE) risk assessment, delivery details and postnatal complications including hamorrhage, perineal trauma and admissions to neonatal intensive care unit.
Results: Fourteen women fell into the BMI 30–35 category in comparison to 32 in 20–25 range. Interestingly, a correlation was noted between raised BMI and anaemia, increased likelihood of smoking, hypertension and gestational diabetes in comparison to the women with a normal BMI. This may be a reflection of poor eating habits and lack of a balanced diet in these women. The study reveals gaps in the care of obese pregnant women with regards to VTE assessment, GTT and recommending vitamin supplementation. In order to improve the quality of this study, GWH may consider implementing an electronic record of the BMI in the patient record. This would also comply with RCOG and CNST recommendations.
Conclusion: Our findings correlate with current understanding of the increased risks associated with being obese in pregnancy and has provided an opportunity to review how a district general hospital currently cares for these women. A review of the current guidelines is recommended alongside imparting current recommendations on pre-conceptual and antenatal dietary supplementation to GPs who care for obese women hoping to start a family.

P1.080

Observational study on comparison of socio-demographic aspects and ethnicity in women delivering in Hospital Sultanah Aminah, Johor Bahru, Malaysia

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Objective: To compare ethnicity and the socio-demographic aspect in the pregnant population.
Methods: Retrospective observational study on the difference among the various ethnicities in those delivering in one of the largest maternity unit in Malaysia from January to December 2011. Samples were obtained from National Obstetric Registry and demographic data were analyzed with SPSS.
Results: Total of 12 531 women delivered. Malaysian citizens made up a total of 11 443 (91.3%) while total non-citizen women are 1088 (8.7%). Among the citizens, majority are Malay 8060 (70.4%), Chinese 1876 (16.4%), Indian 1052 (9.2%) and others 441 (3.9%). Oldest maternal age is 49 and the youngest age is 13. There is no significant difference of mean age within the races with mean maternal age being 28.70 (SD 5.56). Majority unmarried women are Indians with 4.1% and the least are Malays with 3.0%, however there is no significant difference. Mean income among races falls in between RM1001 and RM3000. 15.1% of the Chinese population has income above the mean while Malay has 13.0% and Indian has 9.9%. Mean BMI (kg/m^2) for Malaysian citizens are 25.35 (SD 9.60) with Chinese population having the lowest BMI of 24.15 whereas for Malays are 25.64, Indians 25.41 and others 25.12. Only 10% of Chinese population has BMI > 30 with Malays at 19.7% and Indians at 21.0% ($P < 0.001$). 4.3% of Malays and Indians have maternal height of ≤145 cm while Chinese has 2.1% ($P < 0.001$). All races have similar mean systolic blood pressure (SBP) and diastolic blood pressure (DBP) with mean SBP among the races are 109.81 mmHg (SD15 mmHg) and mean DBP are 69.42 mmHg (SD 13.99 mmHg). Among the races classified with white coding (no risk), Chinese has the highest percentage at 20.8% while Malay and Indian population consists of 16.2% and 10.1% ($P < 0.001$). Ninety-eight percent population is singleton pregnancy and there are two triplets delivered. Majority of mothers who are rhesus negative are Indians (4.7%, $P < 0.001$). 5.1% of Malays are grandmultipara with Chinese at 1.0% and Indian at 2.7% ($P < 0.001$).
Conclusion: Malaysia is a multi-racial country with three major races being Malay, Chinese and Indian population. From our study, our data shows that in our multi-religion, multi-cultural and multi-ethnicity population, obstetric outcomes are not solely depending on obstetric risks but ethnicity as well plays a major role in our population. It would be timely to revise these obstetric risks based on different ethnic population in our practice.

P1.081

Maternal and fetal outcomes in women with chronic kidney disease

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Objective: Evaluation of the maternal and fetal outcomes in women with renal disease.
Methods: Retrospective review of all the electronic records of 27 pregnant women with chronic kidney disease (25) and post renal transplant (2), who had antenatal care in the specialist multidisciplinary obstetric renal clinic in a tertiary inner city London hospital over a period of 18 months from May 2010 December 2011.
Results: In total, there were 27 pregnant women with renal disease who received antenatal care in the multidisciplinary obstetric renal clinic. Of these, seven women had moderate to severe renal impairment (chronic kidney disease (CKD) stage 35) and the rest had mild renal impairment (CKD stage 12). Thirteen women were on one or more disease modifying drugs for renal disease and one woman was on dialysis during the pregnancy. Eleven women had chronic hypertension and 13 women had significant proteinuria at booking. In women with mild renal impairment (CKD stage 12), pregnancy had minimal impact on the renal prognosis with no significant deterioration in the renal function and similarly, there were no adverse maternal or fetal outcomes. Although two babies were admitted to the neonatal unit due to severe fetal growth restriction, there were no complications of stillbirth, preterm delivery or preeclampsia. In those with moderate to severe renal impairment (CKD stage 3–5), 40% had significant deterioration in the renal function, and 60% developed pre-eclampsia. There was also significant increase in the admission to neonatal unit secondary to fetal growth restriction (2/5).
Conclusions: Our maternal and fetal complication rates in women with renal disease are comparable with the recently published evidence. Considerable advances in the antenatal care with high quality maternal services is pivotal for successful impact on the maternal and fetal outcome.

P1.082

Fetal cardiac anomalies – antenatal detection rates and perinatal outcome data over a 3 year period at an NHS Trust in England

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Background: Antenatal detection rates for fetal cardiac anomalies are difficult to ascertain. A 50% detection rate for major cardiac anomalies was acceptable before introduction of outflows tract as part of mid trimester scanning.
Methods: Comprehensive retrospective data collection using multiple sources, including fetal medicine and neonatal databases, and maternity information system. Patients were identified via local fetal medicine referral criteria and cross-referenced against the West Midlands Perinatal Institute. Perinatal data was obtained and cross-referenced against records at the tertiary referral centre, Birmingham Children's Hospital. Two hundred and sixty-seven mothers were identified between August 2007 and July 2010 (36 months) and details inputted to a purpose built Access database. Data was obtained on risk factors, time of diagnosis, cardiac defect, fetal cardiologist referral and diagnosis, and outcomes including, karyotyping, terminations, gestation and mode of delivery, postnatal diagnosis, surgery, and mortality.
Results: Antenatal detection rates depended on the exclusion criteria applied and ranged between 48% when minor anomalies were included, to up to 60% if only major anomalies were considered and 72% if outflow-only anomalies were also excluded. Main diagnoses missed were isolated ventriculoseptal defects (24), transposition of the great ateries (8), pulmonary stenosis (7) and Tetralogy of Fallot (5).
Conclusions: Our current detection rates are above satisfactory. Mandatory screening of outflow tracts as part of Fetal Anomaly Screening Programme guideline should lead to improved antenatal detection rates. These had not been introduced at the time this data was collected. A follow-up audit should show improved antenatal detection rates.

P1.083

Retrospective review of the management of HIV positive pregnant women in a district hospital

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Background: Management of pregnant women who are HIV positive should be done as a multidisciplinary approach with the involvement of consultant obstetrician, specialist midwife, neonatologist and HIV physician to prevent maternal transmission of the disease. Avoidance of breastfeeding, anti-retroviral therapy and appropriate management of delivery has reduced mother-to-child transmission rates from 25% to 30% to <1%.
Objective: To audit the management of pregnant women who were diagnosed to be HIV positive at Heartlands hospital.
Methods: Retrospective review of the case notes of all the women who were diagnosed with HIV positive from January 2006 until January 2012. We looked at the of mode of delivery and the proportion of women who had vaginal delivery compared to elective caesarean section and the neonatal outcome and neonatal transmission rate.
Results: We had 67 deliveries during that time period. 48/67 women had viral load of <40 at the time of delivery. There were 23 planned vaginal deliveries (23/67 = 34.3%). Thirty-four women delivered by elective caesarean sections (34/67 = 50.7%). Six women underwent emergency caesarean section for other fetal reasons (6/67 = 8%). Four patients had unplanned vaginal delivery, of this three patients had poor compliance and delivered vaginally by maternal choice. One patient had APH at 23 weeks and delivered vaginally. Neonatal outcome- there was only one

case of fetal transmission. This was due to poor maternal compliance, mother had unplanned vaginal delivery and refused caesarean section. There were three neonatal admissions, two babies were admitted as they were delivered preterm and one baby was admitted for administration of antibiotics for Group B streptococcal infection.
Conclusions: Counselling and management of women in dedicated clinics reduces mother to fetal transmission.

P1.084
Major placenta praevia with previous scars – a 2-year review

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Objective: To review cases of caesarean deliveries indicated by major placenta praevia with history of previous scar.
Methods: A retrospective study was conducted in Hospital Ampang from 1st January 2010 until 31st December 2011. All patients with major placenta praevia requiring caesarean delivery were identified. Patients with previous scar were studied in detail including the antenatal course, intra-operative and perinatal outcome. Where applicable, the diagnosis of morbid placenta is confirmed via histopathological examination.
Results: There were total of 14 282 deliveries in 2010 and 2011 with caesarean rate of 21.5%. Out of these deliveries, 95 cases (3%) were indicated by major placenta praevia. Nineteen out of 95 cases (20%) were complicated by history of previous scar. Eleven patients had one previous scar, six had two scars, while two patients had three scars. There were nine cases of anterior placenta, seven posterior and three classified as Type IV praevia. Ultrasound Doppler studies were performed in eight of anterior praevia cases. Seven Doppler studies were suggestive of morbidly adherent placenta (four suggestive of placenta accreta, two percreta and one increta). Seven of 19 cases were done as emergency due to antepartum haemorrhage. Thirteen were delivered by specialist, while six were delivered by senior medical officers with specialist/consultant back-up. The diagnosis of accreta was confirmed in two patients with Doppler findings suspicious of accreta. Two patients had false positive Doppler. One patient with suspicion of placenta increta had placenta accreta. One patient with suspected placenta percreta was confirmed to have placenta increta following histopathology report. One patient had false positive Doppler of percreta, however this patient had very thinned out lower segment and adherent bladder base. One patient had a false negative Doppler result and subsequently diagnosed with placenta percreta following histopathology report. Among these five cases who had caesarean hysterectomy and confirmed diagnosis of morbidly adherent placenta, one case had intraoperative blood loss of 800 mL, two cases had 1.5–2 L, one case had 2.5 L blood loss while one case had massive blood loss of 18 L. All babies were delivered with good Apgar Score except for one case of intrauterine death.
Conclusion: Patients with previous scar are at high risk when subsequent pregnancies are complicated by placenta praevia. Doppler assessment plays an important role in assessing risk of placenta accreta and peri-operative management. High risk cases as above should be performed by senior obstetrician with multidisciplinary approach with early recourse to caesarean hysterectomy.

P1.085
Outcome of baby with meconium stained liquor HTF's experience

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Introduction: Meconium aspiration syndrome (MAS) is an infrequent but life-threatening respiratory disease affecting some of the infants born through meconium-stained amniotic fluid.
Objective: To study the outcome of baby with meconium stained liquor at Hospital Tuanku Fauziah, Kangar, Perlis.
Methods: All delivery records of patients who delivered with meconium stained liquor at Hospital Tuanku Fauziah, Kangar from 1st June 2010 till 31st December 2010 were retrieved and reviewed retrospectively. Patients' demographic data and outcome of babies were studied including antenatal problem, mode of delivery, Apgar Score, cord blood ABG, SCN or NICU admission.
Results: Total deliveries at Hospital Tuanku Fauziah during that study period were 2425. Incidence of meconium stained liquor in this study was 165 cases (6.8%). Various antenatal problems were identified. Majority of patient had anaemia, 85 cases (51.5%), 34 cases (20.6%) had diabetes, 11 cases (6.7%) had PROM, eight cases (4.8%) had hypertension, seven cases (4.2%) had oligohydramnios, five cases (3%) had bronchial asthma and 15 cases (9%) had other antenatal problems. Out of 165 cases with meconium stained liquor, 124 cases (72%) delivered via SVD, 26 cases (15.8%) delivered via LSCS and 15 cases (9.0%) delivered via ventouse delivery. Among all babies, 104 cases (63%) had normal CTG, 32 cases (19.4%) had suspicious CTG, 22 cases (13%) had pathological CTG and seven cases (4.2%) had no CTG documentation. Majority of babies (160 cases, 97.0%) had good Apgar Score with only five babies (3.0%) were intubated. Only one case (0.6%) with abnormal cord blood ABG (metabolic acidosis), 58 cases (35.2%) with normal readings and the rest of 106 cases (64.2%) data were not available. From this study, 38 cases (23%) were diagnosed with meconium aspiration syndrome (MAS) with one of them died at Day 4 of life due to severe MAS.
Conclusions: This study showed that, meconium stained liquor were not associated with poor Apgar Score or metabolic acidosis but associated with meconium aspiration syndrome. Majority of patients has successful vaginal deliveries with good Apgar Score, however vigilance fetal monitoring during intrapartum are required to all patients with meconium stained liquor to prevent neonatal morbidity and mortality.

P1.086
Pregnancy and heart disease: two case reports
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Objective: The experience of dealing with a pregnant woman with cardiac disease is on the rise as women with congenital heart disease now can have children after corrective surgery and also, because of increasing mix of immigrant population with acquired heart disease. It is therefore essential for obstetricians to be aware of the presentation as well as management of such patients.
Methods: We present two case reports, sharing the experience of management of a pregnant patient with cardiac stent *in situ*; and secondly, the experience of management of a patient suffering from acute myocardial infarction at 33 weeks.
Results: First case is of 34 years old primiparous woman who had suffered inferior non ST elevation myocardial infarction 3 years ago and underwent cardiac stenting. She was on bisoprolol, simvastatin and ramipril along with aspirin. She underwent preconception counselling and the drugs were reviewed. A plan for multidisciplinary antenatal care, serial growth scans, aiming for vaginal delivery with elective short second stage and avoiding ergometrine for the third stage was made at booking. Labour was induced at 39 weeks but because of fetal bradycardia she underwent an emergency caesarean section. The second case is of 32 years old, para five who suffered from myocardial infarction at 33 weeks, induced by taking illicit drugs. ECG revealed an inferolateral ST elevation myocardial infarction. GTN infusion was started and she was put on integrellin, clopidogrel, aspirin, intravenous unfractionated heparin and bisoprolol. Percutaneous coronary angiography was carried out but did not need further intervention. She received two steroid injections at initial presentation. A multidisciplinary plan was made and labour was induced at 38 weeks. She achieved a normal vaginal delivery without any complications.
Conclusion: The pregnant women with cardiac disease should be cared for in multidisciplinary setting including cardiologists, anaesthetists and obstetricians with expertise in maternal medicine. They should undergo prepregnancy counselling and assessment of cardiac status. The trainees in obstetrics should have adequate training in dealing with a cardiac patient through direct case involvement, case based discussions and other educational tools such as StratOG (RCOG) or attending cardiac clinics.

P1.087
How appropriate are antenatal admissions for abdominal pain?
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Background: Abdominal pain is a common complaint in pregnancy [up to one third of patients presenting to the Maternal Assessment Unit (MAU)], with many possible causes. These may be benign, self- limiting or may require treatment in a hospital setting. In many cases, the diagnosis is made retrospectively, and emerges after a patient is, for instance, admitted and observed. Sometimes a diagnosis may not be made at all. Admissions are expensive and often an unpleasant experience for the patient.
Objective: To determine if women who have presented to MAU with abdominal pain are appropriately admitted to the antenatal ward; to establish what proportion of these admissions could be avoided and how facilitate this in the future.
Methods: A retrospective review of the medical records of 50 cases of pregnant women who presented to the MAU of an inner city London teaching hospital, with abdominal pain and were admitted to the antenatal ward. Cases were selected from the MAU database, excluding those under 16 weeks of gestation, those who were in established labour and/or who had vaginal bleeding.
Results: There were at least 17 identifiable primary indications for admission, both pregnancy and non- pregnancy related. Twenty-six percent of cases were for threatened preterm labour and 16% for uncomplicated urinary tract infection. The decision to admit was made in the majority by the 'middle- grade' doctor, and in 70% of cases, the decision to admit was not discussed with a senior doctor on the team. Approximately one third of admissions were medically inappropriate.
Conclusion: Similar to the UK's Emergency Departments (ED), there is an increasing need to 'treat and street' patients to avoid overloading hospital wards and staff with patients who are appropriate for outpatient management and/or observation. Admissions often have detrimental effects on the patient as well as cost implications. Studies evaluating patients presenting to ED with nonspecific pain requiring observation and review with results of laboratory tests, have concluded that such patients may be suitably managed on a Clinical Decision Unit (CDU) rather than admitted as inpatients to a ward. Our units would benefit from expansion to form CDU- equivalents that would be designed for more frequent medical review/discharge of patients and higher turnover than the antenatal ward. Inappropriate admissions may be reduced with other measures such as use of fetal fibronectin testing, analgesia prior to admission, involvement of senior doctors, and formal ward rounds extending to MAU.

P1.088
Gigantomastia in pregnancy
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Gigantomastia is a rare condition characterised by excessive breast growth. It has no determined etiology but it is thought to be due to excessive physiological levels of hormones or increased sensitivity of the breast tissue. The incidence of pregnancy induced gigantomastia is between one in 28 000 and 100 000 pregnancies. A 39 year-old woman presented with history of breast enlargement in pregnancy. In her medical history she suffered from Grave's diseases and SLE. In the past, after a salpingectomy for an ectopic pregnancy she had noted a gradual increase in size of her breast which increased from size C to size E. She also had bilateral breast fibroadenomas

removed in 2010. It was during this pregnancy that she found increase in the size of her breast and they increased at such a rate that she found herself changing bra size every 3 weeks. She suffered with chronic pain in both breasts due to the weight and also lower back pain. (Pictures 1–4). She had been started on bromocriptine at 30 weeks of gestation and stopped before labour. She was delivered by caesarean section at 34 weeks due to IUGR and Oligohydramnios. Postnatally she is wearing size N bra, which is too small for her, and her breast reaches her waist line. She has suffered two episodes of mastitis post delivery and is currently under the endocrinologist and breast surgeons. She is on the waiting list for reduction mammoplasty. This is both physically and psychologically, a disabling condition and more so during pregnancy and can be treated conservatively, medically or surgically. Improvement is usually seen after delivery.

P1.089
Major obstetric haemorrhage at Ealing Hospital NHS Trust, UK [January 2009 December 2011]

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Ealing Hospital NHS Trust, United Kingdom

Objective: To audit the quality of clinical care in major obstetric haemorrhage at Ealing Hospital NHS Trust over the period of January 2009–December 2011, using National and Local guidelines as standards.
Methods: Information was gathered from patient medical and obstetric notes, hospital data system, and incident reporting system and intensive care records. Relevant information were analysed, compared and conclusions drawn.
Results: All cases were under multidisciplinary direct consultant care. Total number of postpartum haemorrhage (PPH) was 1429 out of 9040 deliveries [16/1000 births] and 15 ITU admissions. This comprises 29% of the all admissions to ITU due to pregnancy related problems. The mean age was 28.5 years and median parity was two. Median estimated blood loss 5000 mL. Caesarean section accounted for 70% of deliveries. Uterine atony accounted for 80% and trauma (uterocervical or perineal) for 40% of cases. Sixty percent of women had multiple causes of bleeding. All cases received oxytocin and prostaglandin. Balloon tamponade and B-Lynch suture were successful in 70% of patients. Three patients needed caesarean hysterectomies. There was one death, complicated by PPH and amniotic fluid embolism. Average length of stay in ITU was 2 days. All patients had invasive monitoring including cardiac monitoring (70%). All patients received packed RBCs and blood products as required.
Conclusion: Obstetric haemorrhage is a leading cause of maternal death and the most common contributor to serious obstetric morbidity in developed and developing countries. Haemorrhage responds well to appropriate treatment although careful preparation and anticipation of problems is required. Early diagnosis, correction of hypovaolaemia, deranged coagulation and prompt surgical control of bleeding avoid unacceptable maternal deaths from haemorrhage. In developed countries such as the United Kingdom, maternal mortality is infrequent [11.39/100 000 maternities]. Hence severe maternal morbidity has been used to measure quality of maternity care. Recommendations made in SUI (Serious Untoward Incident) panel were, improved communication, regular skills drills for all multidisciplinary teams, early involvement of haematology team and follow CNST [Clinical Negligence Scheme for Trusts] protocol. The Use of factor 7 and cell saver were aimed at better outcomes.

P1.090
Obstetrics terminologies interpretation

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Objectives: To determine the uniformity in interpretation of some key everyday obstetrics terminologies among midwives and obstetricians.
Methods: Questionnaire survey. Tertiary maternity hospital setting, with 3500 deliveries a year. Definition of three obstetrical terms tested in MCQ format. There are four possible options for each stem. These three terminologies are: 'Term', 'Post-date' and 'Post-term'.
Results: Of 105 questionnaires sent via internal post, 94 responded. Two top answers are as presented below: 45% interpreted 'term' as pregnancy between 37 and 42 completed weeks, while 34% take this to mean exactly 40 weeks of gestation. Fifty-seven percent interpreted 'post-date' as all pregnancies progressing beyond 40 completed weeks, while 33% take this as pregnancy between 40 and 42 completed weeks. Forty-five percent interpreted 'post-term' as pregnancy progressing beyond 42 completed weeks, while 25% interpreted this to be pregnancy between 40 and 42 completed weeks.
Conclusion: While there are some universally accepted definitions of some obstetrics terminiologies, such as 'Term Pregnancy' (37–42 completed weeks), some confusion still exists as to what constitutes post-date or post-term etc. In particular, this makes management decisions such as indication and timing of induction of labour difficult to communicate among staffs. These are just few examples of such everyday terminologies in obstetrics. Given that only 42% of maternity proffesionals correctly interpreted 'term', there is need for continuing medical education and harmonisation. An international conscensus on definitions of these key words and concepts is long overdue.

P1.091

Cardiac disease in pregnancy: clinical outcome in a tertiary teaching hospital in the University Malaya Medical Centre, Malaysia

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Objective: To evaluate the clinical outcome of women with cardiac disease in pregnancy managed in University Malaya Medical Centre between 2004 and 2009.
Methods: This is a retrospective cohort study carried out between 1st January 2004 and 31st December 2009. One hundred and seventy-four patients with cardiac disease in pregnancy were evaluated. The cases were identified from the delivery registry and the case notes were traced and reviewed. A standardised proforma were used for data extraction and the parameters analyzed included patient demography, specific cardiac lesions, functional status, maternal and fetal outcomes including anesthetic evaluations. The results were analysed using SPSS version 17.
Results: The incidence of cardiac disease in pregnancy in UMMC was 0.5% with a maternal mortality ratio of 3.1 per 100 000. There was one maternal death due to pulmonary embolism for a patient with a mechanical valve despite on adequate warfarin anticoagulation. The incidence of rheumatic heart disease and congenital diseases were similar (47%) with 4% incidence of acquired heart diseases. Only 15% had their pregnancy booked before 12 weeks and 65% of them were in the first or second pregnancy. Thirteen percent had functional status class three while 94% had ejection fraction of more then 61%. Ninety percent delivered beyond 36 weeks and there was no increase in caesarean section rates although the incidences of instrumental deliveries were 21%. The maternal (96.4%) and fetal (80%) outcomes were good. Only 38% had intra-partum epidural analgesia while it remained the commonest mode of analgesia during caesarean section (51%). Four percent of the studied patients required intensive care. Unfortunately, 70% of them defaulted their postpartum appointment.
Conclusions: Cardiac disease in pregnancy remains a significant contributor of maternal morbidity and mortality. Establishing pre-pregnancy clinics with multidisciplinary involvements and strengthening contraception availability and clinics in Malaysia are immediate essential measures. There is an urgent need for an update of the national guideline on cardiac disease, especially for patients with mechanical valves. Greater awareness and communication between health care-givers and patients remains extremely vital and establishment of a national registry to audit the management of such high risk patients will be beneficial as we progress towards realising our Millennium Development Goals.

P1.092

T-cell phenotypic profile in pregnancy: link between immune activation and exhaustion

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Objective: Pregnancy represents a unique state of maternal immune tolerance, driven by the hormones progesterone and oestrogen, which enable fetal tissue to evade the usual host-versus-graft response. This study sought to profile tolerogenic changes in the adaptive immune system that confer an immunosuppressed environment in the maternal systemic circulation.
Methods: PBMC were isolated from healthy pregnant patients (n = 9; age range 28–37 years; mean gestation = 32 weeks) and healthy non-pregnant controls (HC, n = 9; age range 27–47 years). Flow cytometry analysis was performed for T-cell surface markers: senescence and apoptosis (CD57/CD95), activation (HLA-DR/CD38), differentiation (CD27/CD28), CD4 T-regulatory cells (Tregs) (CD25hi/CD45RO), exhaustion (PD-1/PD-L1), maturation (CCR7/CD45RA), naive and thymic emigrants (CD45RA/CD31), early-activation and co-inhibition (CD69/CTLA4/TIM-3). Statistical analysis was undertaken using Mann-Whitney U test (GraphPad Prism 5.0). Statistical significance was defined as $P < 0.05$.
Results: CD4+ T-cells from pregnant patients exhibited significantly higher CD95+ percentage (median 55%, IQR 45.30–66.55) when compared to HC (median 42.30%, IQR 33.40–46.40, $P = 0.006$). The CD4+ T-cell maturation profile in pregnancy showed a greater proportion of effector memory/EM (median 23%, IQR 21.30–25.40 vs. HC median 10.40%, IQR 21.30–25.40; $P = 0.032$) and terminally differentiated effector memory/TEMRA (median 7.29%, IQR 2.85–28.20 vs. HC median 2.83%, IQR 1.22–6.34; $P = 0.0939$) subsets. Tregs represented an increasing fraction in pregnancy (median 0.62%, IQR 0.45–0.84 vs. HC median 0.43%, IQR 0.37–0.605; $P = 0.0636$). Pregnancy was associated with increased activation of CD8 T-cellsfor both CD38-HLA-DR+ (median 1.89%, IQR 1.39–2.76 vs. HC median 2.95%, IQR 2.32–6.10; $P = 0.030$) and CD69+ (median 19.20, IQR 9.06–33.85 vs. HC median 5.80, IQR 3.62–8.76; $P = 0.014$) subsets. Mean fluorescence intensity/MFI of CD8+ TEMRA subsets expressing PD-1 (median 504, IQR 397–580 vs. HC median 341, IQR 260–453; $P = 0.050$) and PD-L1 (median 1441, IQR 1062–2211 vs. HC median 840, IQR 553–1127; $P = 0.019$) were significantly greater in pregnant patients. Conversely, MFI of PD-L1 in naive CD8 T-cells was significantly reduced (median 3006, IQR 2457–3312 vs. HC median 2246, IQR 1440–2778; $P = 0.032$).
Conclusions: Pregnancy modifies CD4 T-cell maturation towards EM and TEMRA subsets. CD8 T-cells show increased activation and greater expression of apoptotic and exhaustion markers, particularly evident in TEMRA subsets. These changes may be a consequence of interaction with fetal antigens and suggest differentiated activated T-cells undergo apoptosis in pregnancy and comprise a negative regulatory function.

P1.093

Effect of body mass index on pregnancy outcomes in nulliparous women delivering singleton babies at Raja Isteri Pengiran Anak Saleha Hospital, Brunei

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Background: In this prospective descriptive study, the first in Brunei, we investigated body mass index (BMI) as a predictor of pregnancy outcomes in a sample of primigravid women at Raja Isteri Pengiran Anak Saleha (RIPAS) Hospital. Previous research suggests that both obese and underweight women are more likely to suffer adverse pregnancy outcomes than normal BMI (20–24.9 kg/m^2) women.

Methods: Data were collected from all nulliparous women delivering singleton babies at RIPAS Hospital from 1st October 2009 to 30th September 2010 (n = 1290). The incidence of medical diseases, neonatal, and maternal outcomes was compared, and the relative risk of developing gestational hypertension (GHT) and gestational diabetes mellitus (GDM) was calculated for the different BMI groups using univariate, bivariate, multivariate analysis and logistic regression.

Results: Of the participants 40.4% had a normal BMI, 20% were underweight and 40% were overweight, obese, or morbidly obese. Hypertension (5.8%) and Diabetes mellitus (2%) were more common in the high BMI groups, while anaemia was common in underweight (34%) and normal groups (23.8%). Obstetric complications such as GHT and GDM were common in the high BMI groups. Underweight women had a lower than normal prevalence of GHT and GDM, but a higher prevalence of preterm labour (P = 0.044) and small for gestational age (SGA) babies (P < 0.05). Induction of labour was higher among the high BMI groups, (37.6%) than among normal (23.4%) and underweight groups (16.4%; P < 0.001). Underweight women were most successful in achieving normal vaginal delivery. All the high BMI groups needed more instrumental delivery or caesarean section (P < 0.001). When maternal age and smoking confounds were controlled, the risk of developing GHT was 2.6 times higher in the normal group than in the underweight group (RR = 2.578, 95% CI = 1.24–5.357) and 3.6 times higher in the high BMI groups (RR = 3.654, 95% CI = 1.781–7.499). GDM was 2.6 times higher among the high BMI women, while maternal age and smoking were controlled (RR = 2.635, 95% CI = 1.143–6.073).

Conclusions: Maternal BMI was strongly associated with pregnancy complications and outcomes. Our study supported recent findings that the risk of adverse pregnancy outcomes increases significantly with an increase in BMI, while low BMI is associated with some risk of adverse outcome, but constitutes a protective factor for gestational hypertension and pre-eclampsia. We stress the need for programmes aimed at increasing community awareness of the importance of achieving normal BMI to achieve a healthy pregnancy.

P1.094

Vaginal delivery of twins: outcomes of 503 twin pregnancies, according to parity and presentation

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Objective: To determine the rate of successful vaginal deliveries in twins with regards to parity and presentation .

Methods: This retrospective audit performed at a tertiary centre in the UK, looked at 503 sets of twin deliveries between 2006 and 2009. Data were retrieved from the Protos database and analysis was performed using Microsoft Excel.

Results: Of the 1006 babies that were delivered, 986 were live births between 22 and 40 weeks of gestation and seven still-born babies after 24 weeks. Twelve were miscarriages at <23 weeks and 6 days, and a case of termination of pregnancy at unknown gestation. Overall 269 women laboured, spontaneously (65%) or following induction (35%) and emergency caesarean section (CS) was the mode of delivery in 82 (47%) and 29 (30%) of these respectively. There were 130 nulliparous women. Fifty laboured spontaneously and of these 29 (58%) had a vaginal delivery (spontaneous or assisted) while 21 cases (42%) underwent emergency CS. There were 28 cases of induction of labour of which, 17 (60%) had a vaginal delivery and 11 had an emergency CS (39%). Elective CS was performed in 52 (35%) cases. There were 46 primiparous women of which 21 (46%) had a vaginal delivery, 13 (28%) had an emergency CS and 12 (26%) primips were delivered by elective CS. Seventeen women laboured spontaneously and 3 (21%) of these went on to have an emergency CS, 14 (82%), having a vaginal delivery. Eleven women were induced and 7 (63%) delivered vaginally. Two hundred and eight cases were multiparous. Seventy-eight (37%) had a vaginal delivery, 76 (37%) had an emergency CS and 54 (26%) had an elective CS. CS was performed in 49% of cases of spontaneous labour and in 8% of cases of induction. Twin one presented cephalic in 128 cases. There were 12 cases of a breech presenting twin achieving a vaginal delivery. Fifty-four cases delivered by instrumental delivery. Twin 2 presented cephalic in 81 cases. Forty-six cases were of vaginal breech delivery. Instrumental delivery was performed in 25 cases.

Conclusions: Labour, induced or spontaneous, had a high likelihood of resulting in a vaginal delivery. Vaginal delivery – spontaneous or assisted – was more likely in primiparous women than in any other group, regardless of the onset of labour. Interestingly, vaginal delivery was achieved in 12 cases where twin one presented breech.

P1.095

Performance of the preterm prevention clinic at an NHS Trust in England

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Introduction: Preterm birth remains the major cause of neonatal mortality, in developed countries, despite major improvements in

neonatal care. Appropriate antenatal intervention helped in prolonging gestation and reducing mortality and morbidity. This study was organised to review the cases managed by the trust's Preterm Prevention Clinic (PPC) and audit its performance based on trust and RCOG guidelines.

Methods: The study involved a retrospective case-note analysis of patients registered under the PPC from November 2007 to November 2009.

Results: One hundred and eighty patients were registered during this time period, with mean age = 29.85 years (18–41) and mean BMI = 27.52 kg/m^2. The commonest reason for referral was previous preterm labour or mid-trimester loss (n = 158). Of these, 100 referrals were made after one previous preterm delivery, 38 were after two and 20 after three or more previous preterm losses. All patients underwent serial transvaginal scan monitoring and infection screening between 16 and 28 weeks. The relevant management options were discussed. Forty patients underwent cervical cerclage, of which 26 received progesterone supplementation. Thirty-five patients had progesterone alone. One hundred and twenty-three patients delivered after 37 weeks with mean birthweight of 2681 g. Thirty-six preterm babies were admitted to the neonatal unit and only seven of these babies died from complications of prematurity. Through the PPC, we achieved a term delivery rate (>37 weeks) in 79%, 71% and 60% in those patients with previous one, two and three preterm deliveries, respectively.

Conclusion: With counselling and appropriate patient selection for intervention, the PPC has successfully reduced prematurity related morbidity and mortality in our unit.

P1.096
Antenatal vitamin D supplementation in a multicultural population in a West London Hospital

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Introduction: Vitamin D deficiency in pregnancy has been associated with a variety of pregnancy complications including an increased risk of pre-eclampsia and gestational diabetes. It also plays a role in fetal development, imprinting and immunological function, with a raised susceptibility to chronic disease in later life. Furthermore, fetuses of vitamin D deficient mothers are at risks of neonatal hypoglycaemia, seizures, heart failure and rickets. In 2008, the National Institute for Health and Clinical Excellence (NICE) recommended vitamin D supplementation for all pregnant women with special emphasis to those at risk of Vitamin D deficiency including women from South Asia, Africa, Caribbean and Middle East and obese women (NICE, 2008). Both groups are in high prevalence in our population. We audited the compliance of this guidance in pregnant women booked in our hospital to improve our care.

Methodology: A prospective audit of 162 mothers delivered during a 2-month period (5th February5th April 2011) at Ealing Hospital Trust. Women were verbally consented and interviewed by a team member using a standardised questionnaire as regards to prescribing, usage and compliance of vitamin D supplementation in pregnancy. Their demographics were collected from their medical records. The audit was registered with our hospital's Clinical Governance audit department. National Research Ethics Service (NRES UK) exempted the project from ethics approval as it was considered an Audit.

Results: One hundred and sixty two women consented to be interviewed and were recruited for analysis. A significant 75% of those interviewed were of 'high risk' ethnicities and a further 23% were obese. Overall, only 52% of mothers took vitamin D supplements, with a third starting pre-conceptually or in the first trimester. Within the 'high risk' ethnicities, the overall compliance in vitamin D supplementation was less than a third with Caribbean and Middle Eastern women more likely to be left out (South Asia 53%, Africa 52%, Caribbean 75% and Middle East 70%). Similarly, only 37% of women with a BMI > 30 kg/m^2 were given vitamin D supplements.

Conclusions: Despite the NICE guidance, implementation of vitamin D supplement is poor even in mothers at greatest risk of vitamin D deficiency. To improve our standards, we have recommended various measures including successful implementation of staff education sessions, identification of women at risk and pro-actively offer them vitamin D supplements in our early pregnancy unit.

P1.097
A short review of the outcome of obese pregnant mothers in Penang Hospital

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Objective: The World Health Organization (WHO) defines obesity as an increased Body mass index (BMI) > 30. There is an increased number of pregnant mothers delivering at our centre with a high BMI. We have reviewed all our patients who delivered at our centre from between September and November who met the criteria of having a BMI > 30. We looked at the outcome of their pregnancy in relation to the complication for the mother and the baby.

Methods: We retrospectively reviewed all the mothers who were of BMI > 30 who delivered at our centre between September and November. A total of 162 patients were identified who met the above criteria. We looked at their ethnicity, antenatal complications such as gestational diabetes meliitus (GDM), mode of delivery, birthweight of their babies and complications for the mother and baby.

Result: The overall number of patients were 162 which made up 11.9% of the deliveries. There were 122 (75%) Malays, Chinese 21 (13%), Indians 17 (10.5%) and others 2 (1.5%). However corrected to the ethnic birth rates. showed Malays (12.3%), Chinese (15.78%) and Indian were 17.5%. This showed higher prevalanece of obesity among the Indian mothers. There were 60 (39%) patients whose pregnancy was complicated with GDM. Out of which 51 were on diet control (31%) and nine patients on insulin (6%). Sixty-one (38%) patients delivered via caesarean section. EMLSCS was 38 (62%) and ELLSCS was 23 (38%). Overall there were four cases of wound breakdown all post caesarean section (2.4%). The babies born weighing <2.5 kg was 9 (5.5%); more than 4 kg was 10 babies (6.5%). The rest were

normal size. There were no cases of shoulder dystocia in this review. There were four babies born with poor Apgar scores at 5 min (<6) however all recovered fully. There was no incidence of thromboembolism in our review.
Conclusion: There are an increase number of obese women undertaking pregnancy. These obese mothers are at risk of increased caesaerean rate at 38% which is higher than compared to the overall rate of 27%. There were a higher prevalance of GDM among obese patients at 39%. There was no increase in morbidity among the babies deliered in our review. There was no increased risk of thromboembolism probabaly due to the prophylactic anticoagualtions. We have to be vigilant in managing these high risk mothers.

P1.098
Medical management of ectopic pregnancy in southern Tunisia

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Introduction: Ectopic pregnancy is the implantation and development of a gestational sac outside the uterine cavity. It is still the leading cause of maternal mortality in the first trimester of pregnancy.
Objective: Clarify the epidemiological, clinical and para-clinical characteristics of the candidates to conservative treatment with methotrexate (MTX), evaluate the effectiveness of MTX as well as predictors of success and study the impact of medical treatment of ectopic pregnancy on subsequent fertility.
Methods: Retrospective study of 100 ectopic pregnancies treated medically with MTX and collected in the department of gynecology-obstetrics at the university hospital of Sfax during a period of 3 years from 1 January 2008 to December 31, 2010.
Results: During this study period, 27 592 births were recorded in the department and 311 ectopic pregnancies were diagnosed with an incidence of 1.12%. Medical treatment was requested in 100 patients (32.1%). The mean age was 31.8 years. Risk factors reported are: the history of abdomino-pelvic surgery (35%), contraception by IUD (34%), history of infertility (14%) and pelvic inflammatory disease (10%). The reason for consultation was in 95% of cases the amenorrhea. The mean initial rate of β-hCG plasma was 1340.41 mIU/mL. In 67% of cases, an hematosalpinx was observed on ultrasound. Ninety-one percent of patients received a single dose of MTX with a success rate of 86.8%. The follow-up of patients showed a mean resolution time of 20 days significantly correlated to the initial rate of β-hCG ($P = 0.001$). An initial rate of β-hCG <1500 mUI/mL, a decrease of more than 15% in β-hCG between D0 and D4 and a hematosalpinx size <3 cm were predictive of therapeutic success. The conception rate after MTX was estimated at 79.7%.
Conclusion: Medical treatment with MTX is a simple technique that has proven its effectiveness both in terms of resolution of ectopic pregnancy than subsequent fertility.

P1.099
Screening for pre-eclampsia in a remote district of Sri Lanka

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Objective: (i) To assess the screening for pre-eclampsia (PE) in primary health care in Anuradhapura district (AD). (ii) To assess the Blood Pressure (BP) and urine protein (UP) measurements in the Antenatal booking visit and the subsequent clinic visits. (iii) To find out the percentage of mothers who's BP was measured before 20 weeks of gestation.
Method: Sample size: 510 pregnant women beyond 28 weeks of gestation. Sample size was calculated to 95% confidence interval for assumed 50% prevalence for PE in AD. Five percent significant population size is 389. Random selection was done. Every odd number, of each day's admission, to the Teaching Hospital Anuradhapura (THA) was selected, during 15th–30th of May 2011. Ninety-eight percent of deliveries of AD take place in THA, according to 2006 national statistics. Therefore this is a representative sample of AD. Data collected from pregnancy records. Verbal consent was taken. Analysis-SPSS
Results: Ninety-four percent of the women had their BP checked at the antenatal booking visit (ANBV). Ninety-three percent of women had their UP checked at the ANBV. In all their subsequent antenatal clinic (ANC) visits, 100% of BP and UP measurements were done in 79.2% women. When considering all clinic visits in all women, BP was measured in 94.82% and UP was measured in 94.42% of all visits. 94.7% of women had their ANBV before 20 weeks of gestation. Eighty-eight percent of women had six or more ANC visits.
Conclusions: The screening for PE in AD is satisfactory. The 2004 annual health bulletin in Sri Lanka sates 17% of maternal deaths were due to PE. Sri Lankan national statistics shows a steady rise of maternal deaths due to PE since 1999–2004.[1] The national strategy adopted since 2004, to improve the screening and encourage women to have the ANBV early as 12 weeks, have given good results. National statistics in 2006 states PE being the cause of only 7% of maternal deaths. There is a marked reduction in maternal deaths during 2007–2009 due to PE in AD (regional health service statistics). Only 5% of maternal deaths were due to PE during 2007–2009. This is an indicator of the satisfactory screening programme done in the ANCs in the AD. AD should be a role model for other districts.
Reference: 1. Medical Statistics Unit, Department of Health, Annual Health Statistics Sri Lanka, 1999–2006.

P1.100

Vaginal birth after caesarean section – acceptability and outcome in an East London University Hospital

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Objective: Women's choice of a vaginal birth after caesarean section (VBAC) will help reduce the increasing lower segment caesarean section (LSCS) rates. Counselling for VBAC is important and a dedicated clinic was set up to address this. The objective of this audit was to determine the acceptability and outcome of VBAC in our setting.

Methods: Two hundred consecutive women over a 4-month period (July to November 2011) with previous LSCS were identified and the outcomes of their pregnancies were obtained by using the birth register.

Results: The age range was 16–47 (average 32.6) years. Parity ranged from 1 to 8. One hundred and eighteen women were Para 1, 45 were Para 2, 26 were Para 3 while 11 women were Para 4 or above. One hundred and sixteen women had one previous LSCS with five women having a previous vaginal birth. In this group, 66 (60%) women accepted a VBAC with 38 (58%) women achieving it. VBAC was achieved in all women with previous vaginal birth. Twelve women (10%) had labour induced – only two had a successful VBAC. Thirty-one women had two previous LSCS, of which seven women had a previous vaginal birth. Six women (19%) opted for a VBAC with only one woman (17%) achieving it. It was surprising that all seven women with a previous vaginal delivery declined VBAC. Uterine rupture was seen in two women but with normal maternal and fetal outcomes. Eighteen women (9%) had postpartum haemorrhage. Surprisingly 45% were in women with a normal vaginal delivery. Five babies (four for abnormal cord pH) were admitted to SCBU. There were 20 babies with a birthweight over 4 kg. The VBAC success rate in this group was 80%.

Conclusion: A 58% success rate is far less than the 72–76% RCOG quoted figure but did not account for factors such as high BMI and previous LSCS for dystocia which can reduce this figure to 40%. Our counselling involves quoting an increased incidence of haemorrhage for LSCS but this was not borne out by our results. We also did not see a higher failure rate with a birthweight >4 kg. This may be explained by regional and unit variations. Women with previous vaginal births did better (in line with current figures) but again there were high numbers that declined VBAC. We now wish to study reasons for women declining VBAC in an attempt to evaluate if we can improve our uptake rates of 60%.

P1.101

Is spontaneous onset of labour more successful than induced labour among patient with one previous scar? A retrospective study in Ampang Hospital, Malaysia

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Objective: To compare the outcome of successful vaginal birth after caesarean (VBAC) section in patients with one previous scar between those who had a spontaneous onset of labour and those who had induction of labour in Ampang Hospital, Malaysia in year 2010.

Methods: A retrospective study was conducted in Hospital Ampang from 1st January until 31st December 2010. Patients with one previous scar and had no previous history of spontaneous vaginal delivery were identified. The onset of labour whether it was a spontaneous or induced labour as well as the mode of delivery were then documented.

Results: From a total of 6832 deliveries, 277 patients with one previous scar opted for VBAC as their mode of delivery. Twenty-five (9.03%) of patients had to have ELLSCS for obstetrics indications. While 208 (75.09%) of patients had spontaneous onset of labour. Forty-four (21.15%) had induction of labour for various obstetrics indications. Fifteen (34.09%) had one tablet of 3 mg prostin, 27 (61.36%) had two prostin tablets and 2 (4.54%) had three prostin tablets. Interestingly to note that eight patients who had one prostin tablet followed by six patients who had two prostin tablets and both of patients who had three prostin tablets had successful vaginal birth. Sixteen (36.36%) patients who were induced had successful vaginal delivery compared to 132 (63.46%) in patients with spontaneous onset of labour. Five (11.36%) and 11 (5.29%) had instrumental vaginal delivery respectively. While 23 (52.27%) who were induced had EMLSCS, of which 14 (31.82%) cases were due to failed induction of labour. Sixty-five (31.25%) patients with spontaneous onset of labour had EMLSCS. There was no documented scar dehiscence or uterine rupture in all 44 patients who were induced.

Conclusion: Patients with one previous scar should be made aware that VBAC will be more successful if labour was a spontaneous onset. If labour need to be induced in patient with one previous scar, it should be noted that the success rate is around 36%. From our data it can be concluded that, induction of labour with prostin tablets in patient with one caesarean scar is relatively a safe procedure.

P1.102

The impact of overweight and obesity in pregnancy: a 6 month retrospective study in Hospital Ampang, Malaysia

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Objective: To determine the impact of overweight/obesity among pregnant women.
Methods: A 6 month retrospective study was conducted in Hospital Ampang. From 3797 deliveries, 911 (23.99%) patients had their BMI documented at 1st trimester booking. BMI were then categorized into BMI < 25 (group 1), BMI 25–30 (group 2) and BMI > 30 (group 3). The maternal outcome which include mode of delivery and estimated blood loss were then identified. NICU admissions were also documented as the fetal outcome.
Results: From 911 cases, 579 (64.15%) had BMI < 25, 205 (22.5%) had BMI 25–30 and 127 (13.94%) had BMI > 30. The percentage of SVD dropped from 75.13% (435/579) in group 1 to 70.24% (144/205) in group 2 and to 62.99% (80/127) in group 3. The differences was statistically significant between group 1 and 3 ($P = 0.0053$) but not between group 1 and 2 ($P = 0.1713$). The number of LSCS increases from 19.17% (111/579) to 25.37% (52/205) and to 33.86% (43/127) by which 13.99% (81/579), 18.05% (37/205) and 24.41% (31/127) were emergency LSCS in group 1, 2 and 3 respectively. Statistical analysis showed a significant ($P = 0.0003$) findings between Group 1 and group 3 but not significant when comparing Group 1 and 2 ($P = 0.0603$). Estimated blood loss (EBL) of >500 mL increases from 2.59% (15/579) in group 1 to 6.83% (14/205) in group 2 and 14.17% (18/127) in group 3 with a significant difference between group 1–2 and 3.($P = 0.0057$ and $P = 0.0001$). The highest NICU admission among patients in group 3 with 26.77% (34/127) followed by group 2 with 23.41% (48/205) and 19% (110/579) in group 1. Significant difference shown between group 1 and 3 ($P = 0.0490$) but not between group 1 and 2 ($P = 0.1755$). Interesting to note that the number of assisted delivery was documented the most in group 1 with 5.7% (33/579) followed by group 2 with 4.39% (9/205) and 3.15% (4/127) in group 3 ($P = 0.4743$ groups 1 and 2 and $P = 0.3432$ group 2 and 3).
Conclusion: Patients need to be well informed that adverse outcome can be significantly reduced by achieving a normal BMI.

P1.103

Neonatal outcome in cases of pregnancy induced hypertension with hyperuricemia

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Objective: To determine the frequency of hyperuricemia in patients with pregnancy induced hypertension and to compare the early neonatal outcome between patients with hyperuricemia and those without hyperuricemia among patients with pregnancy induced hypertension.
Methods: Pregnant women with pregnancy induced hypertension defined as a BP > 140/90 diagnosed at the gestational age >20 weeks will be recruited through emergency or the outpatient department. These patients had their uric acid levels measured with an autoanalyzer using a phosphotungstic acid reagent. All patients underwent antenatal ultrasound with doppler studies in the last trimester to identify IUGR fetuses. These patients were followed till the time of delivery. The birthweight, NICU admissions and stillbirths/ intrauterine deaths were documented.
Results: Our study included 150 pregnant women with a blood pressure of 140/90 mmHg or higher after the 20th week of gestation on two separate occasions. The mean age of the patients was 27.48 ± 4.3 years and the mean gestational age was 35 ± 2.85 weeks. The uric acid level of the patients ranged from 2.5 to 12.8 mg/dL. The mean uric acid level of the patients was 6.3 ± 1.8 mg/dL. Keeping the cutoff limit for hyperuricemia as serum uric acid level >5.5 mg/dL; we had 103 (68.7%) patients with hyperuricemia. Among 103 patients who had hyperuricemia IUGR was seen in 99 (96.11%), IUD in 18 (17.48%), stillbirth in 2 (1.94%) and 72 (69.9%) were admitted to NICU. Among 47 patients who had no hyperuricemia IUGR was present in 32 (68.08%), 9 (19.14%) had IUD, 1 (2.12%) had stillbirth and 16 (34%) were admitted to NICU. Hence IUGR and admission to NICU were more significantly more frequent among those with hyperuricemia; $P < 0.05$. The mean birthweight of babies was 1.73 ± 0.48 and 2.02 ± 0.55 kg among hyperuricemic versus non-hyperuricemic mothers; $P = 0.002$.
Conclusion: We conclude that hyperuricemia is frequent among patients with pregnancy-induced hypertension and patients with hyperuricemia had significantly more IUGR, admission to NICU and significantly lower birthweight.

P1.104

Audit on high dependency care in maternity

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Background: From published studies, about 5% of births need level 2 care and the presence of an obstetric high dependency unit (HDU) reduces admissions to intensive care.[1] Both Safer Childbirth[2] and the NHSLA[3] recommend that obstetric units should be able to provide high dependency facilities, ideally on or near the delivery suite. This aids the delivery of more holistic care and bonding between mother and baby.
Aims: The aim of this audit was to identify women requiring high dependency/Level 2 care on the delivery suite in the antenatal, intrapartum and postpartum period and to calculate the number of bed days utilised, in order to inform future practice and training needs.
Methods: Prospective study from January 2011 to May 2011. Patients were identified on the delivery suite and this was crosschecked with the risk register for the unit. Inclusion criteria for Level 2 care was any of the following- (i) 50% O_2 by face mask to maintain saturation. (ii) Basic cardiovascular support – Hydralazine / Labetalol IV/Arterial line +/− CVP line for

monitoring or access, blood transfusion >4 units (iii) $MgSO_4$ infusion. Data was analysed using Microsoft Excel.
Results: Twenty-eight patients were identified during the study period as receiving Level 2 care on the delivery suite (3% of the total number of 1237 women delivering during the study period). The median age was 29 years. The mean BMI was 26. Eighteen women were primigravidae and 10 were multiparous. In 20 patients the need for Level 2 care was as a result of obstetric haemorrhage, seven had hypertensive disorders and one needed neurological observations. 103.5 bed days were spent caring for these women.
Conclusion: Similar numbers of our women required Level 2 care as with other reported studies. The need for a dedicated HDU area on the delivery suite is clear, as is appropriate training for medical and midwifery staff in order that the women receive both expert and holistic care when they need it the most.
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2. Saving Mothers's Lives: Reviewing maternal deaths to make motherhood safer: 2006–2008. BJOG: An International Journal of Obstetrics and Gynaecology 2011; 118: 173–180.
3. NHSLA/CNST-maternity services 2009–10; Standard 2 criterion 9 – High Dependency Care.

P1.105
Efficacy of a glyceryl trinitrate (GTN) transdermal patch for inhibition of preterm labour

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Objective: The study was undertaken with the aim of evaluating the efficacy of Glyceryl Trinitrate (GTN) transdermal patch for inhibition of preterm labour and recording the adverse effects, if any, associated with the use of GTN patch as a tocolytic.
Methods: This prospective study was conducted in the Department of Obstetrics and Gynaecology of Christian Medical College, Ludhiana. Forty-one women, who were admitted in labour ward with threatened preterm labour between 16 and 36 weeks of gestation, were assigned in the study and 20 mg transdermal GTN patches were applied for tocolysis. The work up and subsequent monitoring of the patients included in the study was done according to protocol.
Results: Of the 41 cases of preterm labour included in our study, 34.16% of patients achieved complete tocolysis by 2 h of application of GTN transdermal patch. The mean time of cessation of contractions, after application of GTN Patch was 4.76 ± 4.67 h. Failure of tocolysis was noted in four patients (9.76%) in the study. Effective tocolysis was seen in 37 patients (90.24%). The side effects developed were minor in nature like headache, nausea and skin rash and in no patient discontinuation of treatment was required.
Conclusion: It was thus concluded from this study that a GTN transdermal patch is an efficacious tocolytic which can inhibit labour. Minor maternal side effects, no adverse effect on the fetus and higher patient compliance make it a convenient therapy to administer.

P1.106
Outcomes of uncomplicated dichorionic diamniotic twin pregnancies at a Security Forces Hospital, Riyadh, Kingdom Saudi Arabia

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Objective: To determine neonatal morbidity and delivery outcomes according to planned mode of delivery in dichorionic diamniotic twin.
Methods: This study was conducted at tertiary-care, Security Forces Hospital, Kingdom Saudi Arabia, about mode of delivery and outcome of uncomplicated dichorionic diamniotic twin pregnancies at 37–38 weeks, during the period from November 2005 to October 2010. The outcomes were, 1 min Apgar score <7, arterial cord pH below 7.20, and 5 min Apgar score <7 for each twin.
Results: Two hundred and twenty-eight patients (228) were included, 116 (50.9%) patients were in the planned vaginal delivery group, and 112 (49.1%) were in the planned caesarean group. There was no significant difference in age, parity, chorionicity, gestational ages at delivery, the mean birthweight, a 5-min Apgar score lower than 7, and an arterial cord pH below 7.20 of the fetuses between both groups. In the planned vaginal delivery group, 90 patients (77.58%) had a vaginal delivery of both twins, 26 (22.41%) had an emergency caesarean delivery. The overall caesarean rate was138 out of 228 (60.52%).
Conclusion: Planned vaginal delivery and planned caesarean delivery of uncomplicated dichorionic diamniotic twin pregnancies at 37–38 weeks have the same neonatal outcomes.

P1.107
Attitudes to obesity in pregnancy

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Objective: To find out the understanding and attitudes of obstetricians and midwives towards overweight and obese pregnant women and their management.
Methods: Questionnaires were sent out to 100 midwives and 100 obstetricians. The questionnaire asked about words used, counselling and attitudes to pregnant women with BMIs of greater 30. The questionnaire also focused on the health professionals training on obesity during pregnancy.
Results: There was a 73% response rate. Sixty-one percent of health professionals felt uncomfortable telling a patient that she was overweight or obese. Sixty-five percent of health professionals had no training on what advice to give the overweight or obese

patient. Two percent of doctors had seen patients for pre-conceptual advice.
Conclusions: Obstetricians and antenatal clinic midwives were unprepared for talking to women about their weight. Unfortunately old myths about diet and exercise were being offered to patients. Very little training had been given to these health professionals. Increasing the confidence and skills of staff in offering service innovations to eligible women is a major challenge to be met if new models of care are to be successful in addressing overweight and obesity in pregnancy.[1]
Recommendations: (i) Set up a specialist antenatal clinic for overweight and obese pregnant women. This would be to offer them an anaesthetic, dietetic, psychologist assessments and advice.[2] (ii) Offer a 6 week postnatal clinic whereby pre-conceptual advice can be given. This could then be followed up by the General Practitioner to prescribe weight loss medications and treatments.
Reference: 1. Davis DL, Raymond JE, Clements V, Adams C, Mollart LJ, Teate AJ, Foureur MJ, Addressing obesity in pregnancy: The design and feasibility of an innovative intervention in NSW, Australia. Women Birth. 2011 Sep 17.
2. Weight management before, during and after pregnancy, NICE, July 2010.

P1.108
Rescue cerclage, are we succeeding in rescuing: a case series

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Background: In women at risk of midtrimester loss or extreme preterm birth, insertion of a cervical cerclage has been shown to reduce that risk. It is difficult to diagnose, reported incidence varies from 318:100 live births.
Objective: To evaluate the effectiveness of emergency cerclage in prolongation of pregnancy.
Methods: This is a case series of ten patients who underwent emergency cerclage between January 2006 andJuly 2011. A chart review of 10 patients who underwent rescue cerclage based on speculum examination and transvaginal measurement of cervical length. All patients had similar management – bed rest, serial HVS, antibiotics, progesterone and steroids after 24 weeks of gestation. Cervical cerclage was performed by the same operator using the same technique
Results: A total of ten patients (two twins and one triplet pregnancies) underwent emergency cerclage. The median gestational age at insertion was 21 completed weeks (range 1424 weeks). The median days gained with suture insertion was 49 days (range 15–161 days), with median gestational age at delivery of 28 weeks. There was one case of pre-labour premature rupture of membranes which resulted in IUD at 22 weeks gestation. There were three neonatal deaths (out of 14 babies), one twin had *E. coli* sepsis and two deaths secondary to extreme prematurity complications (71% survival rate).
Conclusion: Emergency cerclage should be considered as a management option in women with painless cervical dilatation and membrane prolapse in the mid-trimester especially when cervical shortening confirmed by TVUS (<25 mms) and after excluding stigmata of lower genital tract infection.

P1.109
Does substandard care contribute to stillbirth? A retrospective observational study

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Introduction: Around 4000 babies die unexpectedly in the last months of pregnancy or during labour every year in the UK, thus giving at a rate of 5.2 per 1000 total births – one of the highest rates of stillbirth in Europe. Overall, over one third of stillbirths are small-for-gestational-age fetuses with half classified as being unexplained, although substandard care is thought to be a contributory factor.
Objective: (i) To find out the rates of stillbirth in our trust. (ii) To assess any substandard care factors in contributing to the cause of stillbirth.
Methods: A retrospective study was performed. Lists of cases with antenatal and intrapartum stillbirth from January 2008 to December 2009 were taken from the birth register and the case notes were retrieved. Proforma was used to collect information. Data was then analysed. Exclusion criteria includes: deaths due to congenital abnormality and those which occurred <24 weeks.
Results: During the 2 years study period, there were 6326 deliveries and there were 23 stillbirths (3.63 per 1000). Most stillbirths occurred during apparently uncomplicated pregnancies [16 out of 23 (70%)] and thus the cause of stillbirth was unexplained. For the remaining seven stillbirths, three out of seven stillbirths (43%) were small-for-gestational age but growth restriction was only suspected in one stillbirth (14%) of these cases, one out of seven was due to severe impacted head at delivery and three out of seven were due to organisational factors, staffing shortages and delays in interpretations of CTG, resulting in late decisions in delivery. Overall six out of 23 (26%) stillbirths were due to substandard care.
Conclusion: Recognition and prompt management of suspected growth restriction, improvement and training in CTG interpretation, staffing levels and as well as implementation of appropriate guidelines might result in a reduction of stillbirths.

P1.110
MODY in pregnancy – a case report and literature review

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Case report: A 26 year old primigravida, was diagnosed with Maturity Onset Diabetes of the Young (MODY) type 2 at the age of 15 after having previous history of impaired glucose tolerance. She has family history of diabetes affecting her father, maternal grandmother, paternal grandfather and paternal greatgrandmother.

Her OGTT result (0 h = 7.8 mmol/L; 2 h = 8.0 mmol/L) is consistent with a diagnosis of MODY, subtype glucokinase. Genetic testing by polymerase chain reaction (PCR) ands direct sequencing confirmed mutations tested GCK Exons1–10. She booked at the consultant led antenatal clinic. In pregnancy, she was commenced on 5 mg Folic acid and was managed as per gestational diabetes's treatment as it is possible that her glucose levels will become worse during pregnancy. Her glucose control was managed by diet only and she had induction of labour at 40 weeks gestation. She had a normal delivery of a healthy female infant.

Discussion: Glucokinase (GCK) is an enzyme present in the B-cells of the pancreas. It has a vital role in enabling pancreatic B-cells to detect circulating blood glucose levels accurately and adjust insulin secretion accordingly to keep blood glucose levels at a homeostatic set point of approximately 4.5 mmol/L. A mutation in the gene encoding the GCK enzyme impairs its function and thus, insulin secretion is delayed, causing a rise in the homeostatic set point of blood glucose. Patients with GCK mutations generally have mildly raised fasting plasma glucose (FPG), typically 5.5–8.0 mmol/L, and a small increment at 2 h (<4.6 mmol/L) during a 75-g oral glucose tolerance test. Raised FPG is detectable from birth and deteriorates only slightly with age. Patients with this condition are usually asymptomatic and are at low risk from the usual microvascular complications of diabetes. Treatment is not usually necessary. There is a 50% chance that offspring of an affected individual will inherit the condition. If the offspring has the same gene abnormalilty he or she will also run a high glucose from birth but this is normal for the child and doesn't carry health consequences. But if the baby is not affected, the fact that the mother's glucose has been high during pregnancy may mean that the baby is more likely to have a low glucose and this may persist for longer. Thus even if the blood sugar is normal.

P1.111
Incidence and management of shoulder dystocia – a DGH perspective

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Objective: To establish the incidence of shoulder dystocia (SD) in our unit and to evaluate the ability to predict the event as well as to review the management.

Methods: A retrospective study involving 40 cases with SD between June 2010 and June 2011. Data included demographics, risk factors for SD, intrapartum warning signs, intra-event management and neonatal outcome.

Results: During the 12-month period, 4472 deliveries were carried out. Of these, 40 cases had SD reported. Six notes were excluded due to missing case-notes, leaving 34 cases in the final study. The incidence rate in our study was (0.9%). All cases had at least one identifiable risk factor whether antenatal or intrapartum. Shoulder dystocia was mostly associated with prolonged 2nd stage of labour (56%) and performing instrumental deliveries (53%). In 38% of the women labour was induced. Fifty percent of SD cases were post date pregnancies, 44% had fetal macrosomia, while only 9% had diabetes mellitus. Warning signs commonly associated with this condition were observed in 44% cases. Slow delivery of the head was the most common (35%) amongst these signs. In all cases, the first attempted manoeuvre was McRobert's. As a single manoeuvre; it achieved a high success rate (48%). Other manoeuvres were reported in less frequent occasions. Fifty-six percent of the women were delivered by a senior midwife and 41% by the medical obstetric team (3% no documentation). Neonatal team was present at delivery in all the cases. All babies were delivered within 7 min. One baby developed Erb's palsy with no association with antenatal risk factors or intrapartum warning signs. However this case was a mild degree and responded well to subsequent physiotherapy. One baby had clavicle fracture.

Conclusion: The incidence rate of SD was 0.9%, which is higher than the national rate. This may be in keeping with increasing incidence of maternal obesity and fetal macrosomia. However, only 6% had fetal complications (4–16% incidence of brachial plexus injuries reported in the literature). In our study, post-term pregnancies and fetal macrosomia constitute a substantial risk factor for SD. Only 19% of the pregnancies were complicated by maternal diabetes. To conclude, careful prospective evaluation of risk factors is essential in predicting SD. The cases of shoulder dystocia were managed well. This is probably helped by the monthly multidisciplinary obstetric emergency skills drills training in the department, which is essential to optimise outcomes.

P1.112
A complicated case of neonatal allo-immune thrombocytopenia

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Neonatal alloimmune thrombocytopenia (NAIT) occurs when maternal alloantibodies directed against fetal paternally derived platelet-specific antigens across the placenta, analogous to Rhesus Haemolytic Disease, destroying fetal platelets. Although NAIT is relatively common (0.5 cases per 1000 in UK annually) and mainly diagnosed postnatally, our patient was known to have previous NAIT with complicated obstetric and psychiatric history. A 32-year-old presented to our clinic in her 10th pregnancy. She has HPA-1a negative platelets with genotype 1b/1b. There was a history of alcoholism, self-harm and drug overdose in 2006. She had three early gestation miscarriages in 1995, 2003, 2004. Her 1st three children were with a partner with genotype 1a/ib heterogeneity. In her third pregnancy she delivered at 36 weeks. Her baby developed a petechial rash and found to have NAIT and was treated with immunoglobulin and platelet transfusion. In 2001, her baby had intrauterine platelet transfusion and was delivered by caesarean section at 34 weeks as platelet was 10×109/L. The subsequent pregnancy, with a new partner, went full term with no complications. She then had a new partner with genotype 1a/1a homogenous. In 2008 and 2009, she had spontaneous vaginal deliveries at 35 and 36 weeks. Both babies needed platelets transfusion and immunoglobin.

Her initial management plan included weekly immunoglobulin infusions under the supervision of a local obstetrician and haematologist with regular input from a fetal medicine specialist 40 miles away scanning for possible fetal intracranial haemorrhage.
Being homeless with significant social concerns and large consumption of alcohol, she also required intensive social services input and alcohol dependency services support. Unfortunately her attendance was sporadic and she only visited the regional fetal medicine clinic once. At 36 weeks she was found to have a breech presentation. It was deemed too risky to undertake external cephalic version and due to concerns of presenting in preterm labour with breech presentation, an elective caesarean section was performed at 36 weeks. Her baby's platelet was 30 × 109/L.
NAIT requires intensive antenatal surveillance and treatment with patient compliance. We present a case complicated by a poor obstetric history with known social and psychiatric problems. It became especially challenging in her third trimester care as the potential risk of preterm labour in breech presentation leading to traumatic vaginal breech presentation. However, all her babies did not suffer any neurological sequelae and only needed platelets and immunoglobin transfusion.

P1.113
Factors affecting choice of delivery of breech presentation amongst patients and doctors in two large hospitals in Malaysia

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Introduction: The annual report (2007) in Hospital Tuanku Ja'afar (HTJ), Seremban showed a higher caesarean delivery compared to Hospital University Science Malaysia (HUSM), Kelantan (91% vs. 39%).
Objective: This study evaluates the factors contributing to the preference of mode of delivery amongst women and doctors as well perinatal outcome in these two large hospitals.
Methods: There were 175 patients recruited in HUSM and 164 patients in HTJS with term breech. They were interviewed using a validated questionnaire on the preferred mode of delivery. Fifty doctors involved in management were also interviewed. Factors determining preference and perinatal outcome were evaluated.
Results: Higher number of women preferred vaginal delivery (n = 68, 38.9%) and external cephalic version (n = 64, 36.6%) in HUSM compared to CD (n = 43, 24.6%). Women preferred CD (n = 103, 62.8%) compared to ECV (n = 47, 28.7%,) and VD (n = 14, 8.5%) in HTJS. Education level (P = 0.001), occupation (P = 0.029), parity (P = 0.047), religion, culture were contributing factors in decision making in Kelantan while education level (P = 0.001) and combined decision with doctors contributing factors in Seremban. Nine women in both the VD (64.3%) and ECV (19.1%) group changed their option to CD after medical counselling. The success rate of VD was 87.5% (40/45) in HUSM and 100% (3/3) in HTJS. The success rate of ECV was 38.4% in HUSM (15/39) and 55.8% in HTJS (19/34). The eventual CD rate increased in HUSM (n = 110, 62.9%) and HTJS (n = 137, 83.6%). Women keen for VD desired natural birth (100%, HUSM, 92.9%, HTJS) and feared complications (89.7%, HUSM, 78.6%, HTJS) during CD. Of those desirous of CD, what mattered was the safe delivery of the baby. Fetal and maternal outcome were similar in both VD and CD group in both hospitals (P = 0.33, 0.243). VD was a preferred choice in 62% (26/41) of the trainees from HUSM. The medical officers in HTJS preferred CD (78%,8/9).
Conclusion: More women are aware that breech presentation is high risk and prefer CD. However a proportion in Kelantan prefer VD. With proper selection more women could achieve a VD without complication. Credentialing of doctors need to be looked into as confidence and individual preferences play a role in decision of mode of delivery.

P1.114
Posterior reversible encephalopathy syndrome (PRES) in a young postpartum woman

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Introduction: Posterior reversible encephalopathy syndrome (PRES) is a neurotoxic state coupled with unique CT or MR imaging appearance. We report a rare case of PRES in a young postpartum woman, who presented with severe headache and vomiting.
Case report: Thirty year G5P3, presented to Maternity assessment unit 4 days postpartum with severe generalized headache and vomiting.
Background: G5P3, with unremarkable past medical history apart from been an ex-smoker. Her pregnancy was uneventful until 34 weeks, when she was suspected to have intrauterine growth restriction (IUGR). Growth USS showed growth at 7th centile. Repeat USS at 38 weeks demonstrated estimated fetal weight below 3rd centile., Induction commenced at 38 weeks which resulted in a vaginal delivery assisted by uncomplicated epidural analgesia. Live female baby of 2350 g was delivered (Apgars 1–9, 5–9). Her post delivery progress was complicated by a retained placenta which was removed manually. Day 1 postpartum she recovered well and was discharged home. Patient presented on the 4th postpartum day with severe generalized headache and vomiting, and subsequently developed three episodes of generalized tonic/clonic convulsions. Blood pressure was recorded as 120/80 during peripartum period and 150/90 post convulsions. Urine protein was 2400 mg with normal liver function tests. Patient was admitted to ICU for management of recurrent seizures. She was commenced on MgSo4 infusion, Perindopril 2.5 mg OD and Phenytoin 300 mg OD. Blood pressure and seizures completely settled with the treatment. She was discharged after 9 days. CT scan showed Low density areas involving occipital lobes. MRI showed similar multiple cortical and subcortical low density oedematus lesions within the fronto-parietal, posterior parietal and occipital regions as well as within the pons. A progress MRI scan showed complete resolution of the lesions.

Discussion: PRES, also known as reversible posterior leukoencephalopathy syndrome (RPLS), is a syndrome characterized by headache, confusion, seizure and visual loss. It was first described in 1996. It may occur due to a number of causes, predominantly malignant hypertension, eclampsia and due to some medical treatments. On magnetic resonance imaging of the brain, areas of edema (swelling) are seen.

P1.115
External cephalic version: success rate

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Objective: External cephalic version (ECV) is advocated to reduce the incidence of breech presentation at term with the aim of lowering the need for caesarean section. The success rate reported in the literature ranges between 30 80%, with an average success rate of 40% for nulliparous and 60% for multiparous women. In view of the large variation in quoted success rates, the aim of our study was to assess our local success rate in ECVs in order to adequately counsel patients prior to the procedure.
Methods: A retrospective cohort study was conducted in a large London district general hospital. All ECVs in pregnancies delivering between 1 January 2006 and 31 December 2011 were analysed. The data was extracted from Ciconia Maternity Information System (CMiS) and entered into Microsoft Excel for statistical analysis.
Results: One hundred and forty ECVs were performed in the 6 year period. Of the 140 ECVs performed, 37 were successful giving an overall success rate of 26.4%. There were no significant differences between unsuccessful and successful ECVs in the maternal age at delivery (30.5 ± 5.4, 32.0 ± 5.7 years old), BMI (25.9 ± 5.7, 24.4 ± 4.7), parity, infant gender and head circumference (34.6 ± 1.3, 34.5 ± 1.4 cm). Of the 69 nullips, 13 (18.8%) had a successful ECV. In contrast, 24 (34.8%) of 69 multips had a successful ECV. This difference is significant ($P = 0.03453$). Two cases were excluded from this analysis as parity was not recorded.
Conclusions: There was a significant difference between the success rate of ECV in nullips and multips in keeping with other published data. The success rate of ECV in our unit however appears to be lower than that reported in the literature. Patient selection and training of operators might improve the success rate.

P1.116
Successful pregnancy outcome in a woman presenting with Wilson's disease complicated by liver cirrhosis: a case report

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Objective: To report a successful pregnancy outcome in a lady with Wilson's disease, managed in a UK District General Hospital setting. A review of literature is presented along with the case.
Methods: Prospective follow up of the index case throughout her pregnancy, birth and postnatal period. A retrospective review of current evidence was undertaken using MEDLINE and EMBASE databases.
Results: A 28 year old primigravida with Wilson's disease diagnosed in her late teens, presented to us at 14 weeks of gestation. She suffered from liver cirrhosis. Preconceptually her disease was stable on zinc therapy, which required a change to trientine at 20 weeks of gestation because of her iron deficiency, attributed partly to the zinc therapy. A close multi-disciplinary approach involving Obstetricians, Haematologists and Hepatologists was undertaken. Her pregnancy was complicated initially with several episodes of self-terminating epistaxis, which settled by the third trimester. She had an induction of labour for suspected obstetric cholestasis at 38 weeks of gestation and gave birth to a healthy male infant weighing 3014 g. The delivery was complicated by major postpartum haemorrhage of 1500 mL, which was managed successfully. She recovered to her stable pre-pregnancy condition.
Conclusions: This case serves to highlight the importance of appropriate use of multidisciplinary team approach and utilising limited resources in the management of a challenging medical disorder in pregnancy. It illustrates the difficulty in treatment during pregnancy and the fine line between overtreatment and under treatment. Wilson's disease is a rare condition with limited evidence to aid management decisions.

P1.117
Diagnostic dilemma: cornual pregnancy

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We present a case of very early cornual pregnancy and the diagnostic dilemmas we faced. A 38 year old Caucasian woman, G7P3 + 3 presented to A&E with sudden onset severe lower abdominal pain. Her β-hCG was 105 and 100 IU/L 48 h later. Serum progesterone was 31 nmol/L. Transvaginal (TV) ultrasound did not identify a pregnancy. A working diagnosis of pregnancy of unknown location was made. Due to increasing amount of pain, requiring regular morphine, a diagnostic laparoscopy was done which was negative. She then underwent a repeat laparoscopy after representing with increasing pain where the general surgical team was also involved. However the laparoscopy was once again negative. The ultrasound was only able to point to a diagnosis of cornual ectopic 10 days after first presentation. She was successfully treated with two doses of methotrexate after which her symptoms and β-hCG settled. Cornual ectopic is a life threatening early pregnancy problem which is challenging to diagnose and treat. In this case it was especially challenging due to a very early presentation of symptoms at a β-hCG level where scan or diagnostic laparoscopy could not be conclusive.

P1.118

The common 'uncommon' life threatening emergency – peripartum hysterectomy

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Introduction: Peripartum hysterectomy is usually undertaken in cases of life threatening obstetric haemorrhage and is therefore considered a 'near miss' event. We describe a multidisciplinary experience in the management of patients that required a peripartum hysterectomy in our institution.
Methods: Retrospective case note analysis of those patients that underwent peripartum hysterectomy over a 12-month period in a busy inner-city hospital.
Results: A total of 7689 deliveries were recorded between December 2010 and 2011 in our institution. During this time period, 11 cases of peripartum hysterectomies took place. The mean age was 32 years and median BMI was 28 kg/m^2. While nine patients had undergone at least one caesarean delivery in the past, seven cases had undergone caesarean delivery immediately preceding the index pregnancy. Seven were caesarean hysterectomies, three had spontaneous vaginal delivery and one had a ventouse delivery. One was a planned caesarean hysterectomy and rest were performed as an emergency. The most commonly identified cause of haemorrhage was uterine atony (73%). Two cases had ruptured uterus and a morbidly adherent placenta was found in one. Eight patients (72%) had a general anaesthetic from the outset and in three patients (27%) spinal anaesthetic was converted to a general. Intraoperatively all patients had invasive blood pressure monitoring and seven also had central venous pressure monitoring. The average estimated blood loss was 4250 mL per patient and all have received RBC and FFP transfusions. Four also received cell salvaged blood. All cases were performed by obstetric consultants and nine different consultants performed the 11 peripartum hysterectomies. All the patients were managed with sequentially administered uterotonic agents. Four were managed with an intra-uterine Rusch balloon with a vaginal pack, while none had a B Lynch brace suture. Bilateral internal iliac balloon embolisation was performed in the planned caesarean hysterectomy. Seven patients required level three care on the general critical care unit. There were no case fatalities and all the patients were safely discharged home with an average hospital stay of 7 days.
Conclusion: The decision and management of peripartum hysterectomies was found to be timely and appropriate. Our unit can provide cell salvage in planned high risk patients but it is not guaranteed in emergency due to lack of trained staff. We propose that criteria to recognise at risk patients should be set and all such patients should be seen by a senior anaesthetist in the clinic.

P1.119

Successful pregnancy after endometrial ablation

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Objective: To report a case of successful pregnancy after thermal balloon ablation.
Methods and results: A 36 year old multiparous woman had endometrial ablation (Thermachoice; Gynecare, Ethicon Ltd., Edinburgh, UK) for menorrhagia. Six months following the procedure, the woman presented with 5 weeks amenorrhoea and a positive pregnancy test. Pelvic ultrasound scan confirmed a viable intrauterine pregnancy. The high risk nature of the pregnancy and possible adverse outcomes for both fetus and mother were discussed with the woman. Anamoly scan was normal. However there was evidence of funnelling of the cervix with the cervical length measuring 9 mm. MRI confirmed normal endometrial interface with no evidence of accreta. Scans at 24 and 28 weeks demonstrated normal interval growth and liquor volume. She was admitted at 29 weeks and 1 day of gestation with ruptured membranes. A week later she had a normal vaginal delivery of a healthy baby boy weighing 1708 g. The cord arterial ph was 7.19. She had a postpartum haemorrhage following delivery and manual removal of placenta which was not morbidly adherent. She lost 3 L of blood and required 3 units of blood transfusion. The mother was discharged home 2 days later and the baby was kept in the intensive care unit.
Conclusion: Pregnancy after endometrial ablation (EA) although rare has been on the rise in recent times with a reported incidence of 24–68. Thermal balloon ablation is one of the widely used techniques in the UK. The purpose of the procedure is to completely ablate the endometrium. The ablated endometrium heals by scarring and fibrosis. The endometrial fibrosis following EA and subsequent poor placentation may explain the associated complications such as miscarriage, premature rupture of membranes, preterm labour, intra uterine growth restriction and postpartum haemorrhage. In our case, the large funnelling and very short cervical length of 9 mm would suggest imminent miscarriage. Scarring and healing by fibrosis upto the level of the internal os following the procedure may account for the delay in delivery. There have been numerous case reports of pregnancy after EA with adverse fetal outcomes. Our case represents a pregnancy with a favourable outcome for the fetus. It adds to the accumulating evidence about pregnancy after EA and helps inform women during decision-making in the event of such a pregnancy.

P1.120

Intrapartum care: do we bother? An audit of practice in a District General Hospital

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Introduction and background: Birth experience for any woman is complex and dimensional. The goal of intrapartum care is to provide a safe and satisfying experience that supports the

normalcy of birth and empowers the woman's expectations. Promoting normal birth is an important philosophy of maternity care, with intervention only if necessary for the benefit of the mother or child. About 600 000 women give birth in England and Wales each year, of which about 40% are having their first baby. Most of these women are healthy and have a straightforward pregnancy. Almost 90% of women will give birth to a single baby after 37 weeks of gestation with the baby presenting cephalic. The NICE guidelines on intrapartum care provide information for healthcare professionals and women about care of healthy women and their babies during childbirth. We conducted an audit to look at the compliance with the NICE guidelines for intrapartum care in our busy district general hospital delivering 3200 women per year.

Methods: A retrospective analysis of case notes of 40 women who delivered over a week period during the month of December 2010 was done. The women were chosen by random selection. Data was analysed using Microsoft Excel.

Results: Sixty percent were over 35 years of age. Fifty-three percent of these patients were having their first babies. Apart from advanced maternal age there were no other antenatal risk factors in this group of women. Twenty-one were purely midwifery led and 19 were under shared care. Thirty-two percent of women did not have their birth plan discussed. Five percent did not get initial observations. Only 85% had documented abdominal examination. Eighteen percent of women did not have a partogram and in 30% of women it was incompletely filled. Appropriate use of CTG was noted but hourly systematic assessment was not done in 23% of patients. CTG was not classified in 15% of patients. Documentation after CTG review by obstetricians was found to be poor in a good proportion of patients. A few patients (5%) had a prolonged second stage and appropriate action was not taken. The third stage managements were found to be appropriate.

Conclusion: As evidenced by this audit, there is currently a gap that exists between evidence and practice. Hence every attempt should be made to strictly adhere to the guidelines in order to give the women the best care possible and to prevent litigations.

P1.121
Audit on outcome of instrumental deliveries: are we doing enough?

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Objective: To evaluate the current practice of instrumental deliveries at Lincoln County Hospital, a district general hospital in UK. Design: A quantitative case note audit was performed retrospectively for 2 months and prospectively for 1 month.

Setting: A single maternity unit in a district hospital setting in UK. Population or Sample: Out of total 111 undergoing instrumental deliveries, 98 notes were recovered.

Methods: The data collections were done through case notes study.

Main outcome measures: There is need for physical presence of and confirmation of clinical findings by consultant before transfer to theatre for trial to reduce unnecessary interventions, costs of trial in theatre, more staff involvement and engagement and delay in delivery time where early delivery could be beneficial, as delivery in theatre takes longer time than in room.

Results: This audit recommended that all medical staffs need to document key clinical findings in the main delivery notes and also in instrumental delivery forms, more mention about abdominal examination and improvement in bladder care need to be done. There is need for confirmation of clinical findings by consultant before transfer to theatre and more attempts of fetal blood samplings, if expecting delays.

Conclusions: Unsuccessful trials are associated with maternal and neonatal morbidity. The shortening of duration training as well as reduction of working hours in the UK has led to obstetrics trainees being less experienced in conducting instrumental deliveries. Thus, many junior trainees may prefer to conduct relatively uncomplicated instrumental deliveries in theatre. The physical presence of consultants during their dedicated labour ward sessions and also during trial of instrumental deliveries is essential for reduction of unnecessary interventions like second stage caesarean sections, reduction of the number of unnecessary trials in theatre and associated maternal and neonatal morbidity. This will also help to reduce cost and complaints and be better for ongoing training of junior medical staff. We recommend that antenatal classes in all hospitals in UK should uniformly involve discussions about expectations and understandings of the expectant mothers and their family members regarding prolonged second stage, different procedures undertaken, pain relief, maternal and neonatal morbidity and complications associated with instrumental deliveries and second stage caesarean sections. These can be verified again in between 36 and 38 weeks by medical staff.

P1.122
Vaginal birth after previous caesarean section (VBAC) in the maternity unit of a Kent hospital, UK

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Background: There is widespread public and professional concern about the increasing proportion of births by caesarean section. Increasing rates of primary caesarean section have led to an increased proportion of the obstetric population who have a history of prior caesarean delivery. The chances of successful VBAC are 72–76%.

Objective: To monitor adherence to RCOG green-top guideline 45: Birth after previous caesarean section (CS) published on February 2007 within our maternity unit.[1]

Methods: A prospective analysis of 110 women with previous one CS and singleton, cephalic pregnancy, was performed within the Maidstone and Tunbridge Wells NHS Trust between November 2009 and June 2010. One hundred and one women with previous one CS were included. Six women with >1 CS were excluded.

Results: VBAC was planned in 31% of women with previous one CS. Successful VBAC rate was 63% within the Trust. The mode of delivery was discussed and documented in 28% of notes and all women were referred to consultant-led antenatal clinic. The previous uterine operation was identified in 32%. Risk of uterine rupture of 22–74/10 000 was discussed and documented in every woman's notes. The mode of delivery was discussed and documented in 49% of women at the first consultant appointment, 41% (45/110) received information leaflets. Ten percent (12/110) of all women planned for VBAC were managed for preterm labour. At 34 weeks in consultant's led clinic mode of delivery was mutually agreed and documented in 79% (87/110) of case notes. Thirty-one percent of all women with previous one CS decided for VBAC. Only 27% were informed about the continuous fetal heart rate monitoring in labour and 39% had documented postdates management plans. Eighty-one percent (27/33) of planned VBACs received electronic fetal monitoring in labour and every woman had labour progress documented. 3/110 babies were admitted to SCBU with an Apgar score of <7 at 5 min with PH <7.10 in two of them. There was good documentation of discussion with consultants regarding induction of labour or use of syntocinon in all notes.
Conclusion: Our audit results and practice show adherence to the national evidence-based guidelines. There is scope for improving discussion and documentation of mode of delivery at the preliminary midwifery and first antenatal clinic appointment. VBAC clinics should be held weekly in all NHS hospitals to promote normality of birth.
Reference: 1. RCOG Green-top guideline No 45: Birth after previous caesarean section.

P1.123
Diet and exercise in pregnancy

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Objectives: Obesity in pregnancy is an increasing problem with nearly 50% of women entering pregnancy in the UK already overweight with a body mass index (BMI) > 25. Obesity and excess weight gain in pregnancy has been shown to have adverse maternal and fetal outcomes. Yet there seems to be a lack of information to women in the UK about the risks of obesity in pregnancy and the importance of avoiding excessive weight gain, which is compounded by common myths about 'eating for two' and avoiding exercise. The current advice is to eat a 'healthy and varied diet' by the Food Standards Agency, and the RCOG recommends 30 min moderate physical activity per day. We wanted to assess pregnant women's attitude towards diet and exercise in pregnancy.
Methods: We conducted a survey among 87 women attending antenatal services at St Mary's Hospital, London.
Results: Sixty-eight percent women knew their weight but only 22% knew their BMI. Twenty-seven percent of participants did not perform any exercise at all before pregnancy. Of those who did exercise, 63% reduced how much exercise they did during the pregnancy. The majority of women (94%) knew the range of acceptable weight gain in pregnancy. However only 44.4% knew the current recommendation for increased calorie intake (200 kcal), while 27.2% were consuming one extra meal per day, and 8.6% thought two extra meals were required. Although 91% knew excess weight gain was not beneficial for maternal health, 63% thought that it was beneficial for baby. Eighty percent of women said that they had been given some form of advice about diet and exercise in pregnancy, but 43% wanted further guidance.
Conclusions: The results of this survey has shown that there are still misconceptions amongst women about weight gain and its implications on pregnancy, the actual extra nutritional needs during pregnancy and the benefits of exercise. We feel that more information is needed to educate women on diet and exercise during pregnancy so that they make the right lifestyle choices which will benefit mother and baby.

P1.124
The association of maternal obesity and gestational weight gain with obstetric and neonatal outcomes among parturients in Seremban, Malaysia

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Objective: To look for association between maternal body mass index and gestational weight gain and obstetric and neonatal outcomes among Malaysian women in Seremban, Malaysia.
Methods: Women who had their antenatal booking at <12 weeks of gestation were invited to participate into this prospective cohort study. The women's body mass index (BMI) was determined at booking and classified based on the WHO weight criteria. Gestational weight gain was classified according to the new Institute of Medicine Gestational Weight Gain Guideline. Obstetrics and neonatal outcomes of different groups were compared. Level of significance was set at $P < 0.05$.
Results: A total of 500 parturient participated in the study. Eleven percent were underweight, 52% had normal BMI, 25% were overweight and 12% were obese (8.9% obese class 1 and 3.1% morbidly obese). We found significantly higher incidence of gestational diabetes mellitus (GDM) and prevalence of pre-existing hypertension but not pre-eclampsia in obese pregnant mothers compared to non-obese patients. Mothers with abnormal gestational weight gain were more likely to develop GDM but not the other complications during pregnancy. Abnormal gestational weight gain and obese mothers were also more likely to deliver by caesarean section and 44% were electively scheduled. There were no significant differences in the mean birthweight, Apgar score, neonatal admission, fetal abnormality and live birth rates between obese and non-obese mothers as well as different gestational weight gain groups in our study.
Conclusion: Maternal obesity and abnormal weight gain increases the risks for developing GDM and birth by caesarean section.

P1.125
Outcome of reduced fetal movements in singleton pregnancies after 24 weeks

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Objective: To identify the maternal and fetal outcomes after reduced fetal movements in singleton pregnancies after 24 weeks of gestation.
Methods: Retrospective data collection on all singleton pregnancies after 24 weeks who were admitted for reduced fetal movements in Kuala Lumpur Hospital between 1st January until 31st December 2010. Collectively there were a total of 303 patients who were seen in the Patient Assessment Center (PAC) for reduced fetal movements. Dates were verified by using their LMP (last menstrual period) or 1st trimester scan. All mothers were given the fetal kick chart for documentation and to attend hospital if they felt <10 kicks in 12 h (between 9 am and 9 pm). The results were analyzed by statistical methods using Microsoft Excel.
Results: Most mothers had normal admission CTG. Only three mothers had suspicious CTG and underwent caesarean section for that reason. Two hundred and seventy-five mothers expressed increased anxiety about the presenting complaint, while some were unable to care of other children or were taken away from work due to the ward admission. There was no bad outcome from the admissions for reduced fetal movements and 223 mothers were managed conservatively. This would constitute admission and observation of their fetal kicks throughout the next 24 h. However 80 mothers required intervention either by induction of labour or emergency caesarean section if they had either abnormal CTG or other risk factors for stillbirths. Only four mothers with reduced fetal movements actually had intrauterine death with subsequent macerated stillbirth, but no low Apgar score, neonatal death or encephalopathy. Most had good fetal outcome.
Conclusion: (i) Routine fetal kick chart is not recommended, in line with the RCOG Green-top Guideline on Reduced Fetal Movement no. 57 (2011) and NICE guidelines on Antenatal Care CG 62 (2008). It has been shown to increase maternal anxiety and unnecessary intervention without improving the perinatal outcome. (ii) Almost all reduced fetal movement had good fetal outcome and could have been managed as an outpatient with adequate counselling and reassurance to the mothers. (iii) A change of practice in antenatal care in Malaysia is advocated with regards to reduced fetal movements.

P1.126
Successful outcome of a pregnancy with essential thrombocythaemia: a case report and literature review

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Essential thrombocythaemia is the commonest myeloproliferative disorder in women of child bearing age. A number of case reports have been described in literature but the optimum management of this disorder is still not established. Here we report a case of essential thrombocythaemia in pregnancy with good outcome for both mother and baby. Due to rarity of this disorder UKOSS is collecting data on myeloproliferative disorder in pregnancy. We feel that reporting this case will add to the current literature and aid decision making in care of these patients.

P1.127
An audit of early pregnancy screening in a district general unit

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Background: Screening in pregnancy allows parents to make informed decisions about pregnancies in which the fetus may have severe abnormalities. The recommended method of screening for chromosomal abnormalities in early pregnancy changed in 2009 from use of the triple test – serum alpha-fetoprotein, β-hCG and uE3 at 16 weeks of gestation – to the combined screening test – serum β-hCG and PAPP-A plus nuchal translucency on ultrasound at 11–13 weeks of gestation. This protocol has been showed to have greater sensitivity and specificity for detecting chromosomal abnormalities[1] and, as it is carried out earlier, allows for earlier diagnosis by invasive testing. This audit was carried out to compare the results of the two protocols in a small district general unit.
Objective: To audit the coverage of women being offered and taking up early pregnancy screening. To audit the success of nuchal translucency scanning within the unit. To audit whether women are being offered invasive testing if appropriate and which types (CVS or aminiocentesis). To compare the outcomes of the previous triple test protocol with the new combined screening protocol.
Methods: Retrospective case note analysis of all patients presenting in early pregnancy between April 1st 2010 and April 1st 2011.
Results: We found that early pregnancy screening was offered in 99.9% of cases (standard: 100%) and taken up in 88%. Scanning for nuchal translucency was successful in 96% of cases. Invasive testing was discussed in 100% of cases in which the risk was found to be high. Invasive testing was carried out in 3% of cases, compared with 12% under the previous testing protocol. This reduces the number of women exposed to the 1% risk of miscarriage inherent in invasive testing of any kind. Additionally, as this screening test is carried out at 11–13 weeks it was possible to make a definitive diagnosis at an early stage, allowing greater scope for considering the consequent decisions.
Conclusion: We found that the unit performed well at offering screening and testing as appropriate and that the new screening protocol reduced the number of invasive tests carried out.
Reference: 1. Health Technology Assessment 2003, vol 7, no. 11: First and second trimester antenatal screening for Down's syndrome: the results of the Serum, Urine and Ultrasound Screening Study (SURUSS).

P1.128
Pregnancy care in women with BMI > 35: a prospective audit

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Aim: To audit the care of pregnant women with BMI > 35. Taking Cardiff and Vale NHS trust guidelines (2008) and CMACE/RCOG joint guidelines (2010) as standards.
Methods Used: Prospective audit between 12th May 2011 till 20th June 2011. At total of 36 cases were identified. We looked at prenatal, antenatal, Intrapartum and postnatal care. Data was collected on a performa from patient case notes, results were analysed and compared to standards.
Results and Discussion: Demographically 55.5% patients were between 18 and 30 years of age. Forty-seven percent were Primigravida. Sixty-six percent patients had BMI between 36 and 40. The largest recorded BMI was 76. None of the patients took 5 mg folic acid as recommended by RCOG. GTT was performed in 97% cases. Thromboprophylaxis was prescribed in five cases. Fifteen cases developed Antenatal Medical problems. Intrapartum care plans were documented in 10 cases. Intrapartum thromboprophylaxis was prescribed in 10 cases. Fourteen had Normal delivery, four had Instrumental delivery and 16 had Caesarean section. Intrapartum complications included difficult anaesthesia (3), difficult access (6) and PPH (7). Postnatal thromboprophylaxis was prescribed in 21 cases. Overall management of these patients was lacking in appropriate documentation and thromboprophylaxis.
Conclusion: Thirty-six cases in 38 days reflects the proportion of large BMI patients that deliver within the University Hospital of Wales. We need to update our guidelines and follow CMACE/RCOG guidelines especially with regards to thromboprophylaxis.

P1.129
Maternal outcome of early versus late termination of pregnancy among pregnant mothers with prenatal diagnosis of lethal fetal anomalies: a retrospective review

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Objective: To compare the maternal morbidities between early (<22 weeks of gestation) and late (≥22 weeks of gestation) termination of pregnancy (TOP) among pregnant mothers with prenatal diagnosis of lethal fetal anomalies.
Methods: This was a retrospective study reviewing all patients diagnosed prenatally to carry lethal fetal anomalies in Hospital Tengku Ampuan Afzan, Kuantan, Pahang, Malaysia during the year of 2011. Data was traced from patients' medical record in hospital record office. These patients were divided into two groups, i.e. early and late TOP groups. The maternal morbidities and outcome of these two groups of patients were compared respectively.
Results: There were 25 patients diagnosed to have lethal fetal anomalies, included fetuses with multiple structural abnormalities (40.0%), anencephaly or severe encephalocele (32.0%), non-immune hydrops fetalis (16.0%) and syndromic fetuses (12.0%) i.e. Pentalogy of Cantrell and Edward's syndrome. Seven (28.0%) and 18 (72.0%) patients had early and late TOP respectively. All patients with early TOP aborted vaginally. Among those with late TOP, five (27.8%) patients had complicated delivery, included three (16.7%) with assisted breech delivery and two (11.1%) with abdominal delivery. Patients with late TOP were more prevalent to morbidities compared to early TOP arm, i.e. frequent hospital admissions (33.3% vs. 14.3%), abnormal lie in labour (22.2% vs. 0.0%), symptomatic polyhydramnios requiring amnioreduction (22.2% vs. 0.0%), postpartum haemorrhage (16.7% vs. 0.0%), blood transfusion (11.1% vs. 0.0%) and uterine rupture (5.6% vs. 0.0%). Mean duration of hospital stay was slightly longer in the late TOP group (6.9 ± 4.1 days) than the early TOP group (5.7 ± 2.8 days). One patient with late TOP developed impending eclampsia requiring IV $MgSO_4$ infusion. However, there was higher prevalence of retained placenta in the group of early TOP (28.6%) compared to the group of late TOP (5.6%). One patient with early TOP developed endometritis following manual removal of retained placenta.
Conclusion: Patients with late TOP seem to have more morbidities compared to patients with early TOP though the sample size is too small to yield statistically significant result. It may suggest that early prenatal diagnosis and TOP are essential to minimise the maternal morbidities and improve the outcome. More data need to be recruited to prove this conclusion.

P1.130
Retrospective analysis: amniocentesis and chorionic villus sampling

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Objective: An estimated 5% of the pregnant population is offered a choice of invasive prenatal diagnostic tests, usually Amniocentesis (AM) or Chorionic Villus Sampling (CVS) depending upon the timing of any initial screening test that is performed.[1] AM is the most common invasive prenatal diagnostic procedure undertaken in the UK whereby amniotic fluid is obtained for karyotyping from 15 weeks onwards. CVS is usually performed between 11 and 13 weeks of gestation involving aspiration/biopsy of placental villi.
We aim to: (i) Compare the percentages of invasive prenatal diagnosis tests (AM or CVS) done in a maternity hospital in the North of Scotland over a period of 3 years. (ii) Examine the clinical considerations or reasons why these diagnostic tests were performed.
Methods: Seven hundred and thirteen invasive procedures for diagnostic testing were performed between 2009 and 2011. We looked at whether AM or CVS were performed and why these tests were done.

Results: AM was the preferred procedure performed in 80% of cases over 3 years, the remaining 20% were CVS. In 2011, 28% of invasive diagnostic tests were CVS as compared to 14% in 2010 and 17% in 2009. Reasons/clinical considerations for performing tests: Increased risk of Down's syndrome = 51.2% Abnormal ultrasound (USS) findings (suspected anomalies) = 17.3% Family history of genetic disorders = 11.5% Increase in maternal age = 6% Maternal request = 9.1% No documentation = 4.9%
Conclusion: AM is generally preferred to CVS as a choice of invasive prenatal diagnostic test. However, there seems to be a trend favouring CVS in 2011 as compared to 2009 and 2010, with a *P*-value of 0.0002 < 0.005. This is most likely due to the fact that first trimester screening only started in 2011. The main reason for offering AM/CVS to pregnant women is; an increased risk of Down's syndrome, followed by abnormal USS findings, history of inherited disorders, and maternal age. In 9.1%, procedures were performed as a result of maternal requests due to various reasons.
Reference: 1. RCOG, Amniocentesis and Chorionic Villus Sampling Green-top Guideline No.8.

P1.131
Pregnant woman with thrombophilia presenting with massive rectus sheath and pelvic haematoma: a case report

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A 33 year old gravida 3 para 2 with known thrombopihilia was booked for antenatal care. She was known to have heterozygous prothrombin gene mutation. Her father died of heart attack at the age of 37 years and brother died of pulmonary embolism at age of 30 years. She smokes about 10 cigarettes a day. She had first episode of venous thromboembolism at the age of 17 years and had three further episodes; two episodes during the antenatal and postnatal periods in her first and second pregnancies respectively and a saddle pulmonary embolism 4 years after the second pregnancy. She was delivered by caesarean section in both her previous pregnancies. Her long term warfarin treatment was discontinued when a USS confirmed she was 8 weeks pregnant. She opted to continue with the pregnancy as the risk of fetal anomaly was perceived to be small and was commenced on clexane 40 mg twice daily. Anomaly USS done at 22 weeks was essentially normal. Pregnancy remained uneventful until she presented at gestational age of 24 weeks with abdominal pain with associated anaemia. An abdominal and pelvic USS revealed a massive rectus sheath haematoma and pelvic haematoma measuring 22 × 5.7 × 10 cm and 12 × 10 × 11 cm respectively. Low molecular heparin was discontinued due to the haemorrhage. The decision to discontinue clexane was reached after consultation with the haematologist and she had retrievable vena cava filters inserted. She had an elective caesarean section plus bilateral tubal ligation at 36 weeks with the delivery of a life healthy baby. Intra-operatively, the rectus sheath haematoma was found to have resolved significantly. She was followed up in the postnatal clinic and haematology out-patient.

Discussion: Bleeding complications are rare with the use of clexane in pregnancy. Retrievable vena cava filters has been found to be a safe alternative to anticoagulant treatment in pregnancy. Anatomic consideration makes infrarenal VCF technically difficult in pregnancy. Suprarenal VCF offers an easier alternative, however, the potential thrombogenicity of suprarenal VCF with possible renal compromise demand caution with this approach.
Conclusion: Retrievable VCF is safe alternative to anticoagulant treatment for pregnant women with increased risk of thromboembolism that are intolerant or for some reasons unsuitable for anticoagulant treatment. It should also be considered in patient with thromboembolism despite adequate anticoagulant treatment.

P1.132
Symphysial fundal height (SFH) measurement in pregnancy for detecting abnormal fetal growth

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Background: Symphysial fundal height (SFH) measurement is commonly practiced primarily to detect fetal IUGR. Undiagnosed IUGR may lead to fetal death as well as increase perinatal mortality and morbidity.
Objective: The objective of this review is to compare symphysis fundal height measurement with serial ultrasound measurement of fetal parameters or clinical palpation to detect abnormal fetal growth (intrauterine growth restriction and large-for-gestational age), and improving perinatal outcome.
Methods: We searched the Cochrane Pregnancy and Childbirth Group's Trials Register (February 22 2011). Randomised controlled trials including quasi-randomised and cluster-randomised trials involving pregnant women with singleton fetuses at 20 weeks' gestation and above comparing tape measurement of symphysis fundal height (SFH) with serial ultrasound measurement of fetal parameters or clinical palpation using anatomical landmarks. Two review authors independently assessed trial quality and extracted data. Consultation of the third author was done if needed.
Results: One trial involving 1639 women was included. It compared SFH measurement with clinical abdominal palpation. There was no difference in the incidence of IUGR (RR 1.32 95% CI 0.92–1.90). There was no difference for the other measured outcomes, perinatal death, neonatal hypoglycaemia, admission to neonatal nursery, admission to the neonatal nursery for IUGR, induction of labour and caesarean section.
Conclusion: There is insufficient evidence to determine whether SFH measurement is effective in detecting IUGR. We cannot therefore recommended any change of current practice. Further trials are needed.

P1.133
Third stage management: does CMACE advice need to be reconsidered?

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Objective: Traditionally syntometrine was used for management of the third stage of labour in the United Kingdom. The recent CMACE report suggested routine use of this drug be discontinued and 'intramuscular oxytocin should be the routine drug for active management of the third stage of labour' due to the association of syntometrine as a contributory factor in the deaths of three women from cerebral haemorrhage between 2006 and 2008.[1] In July 2011 the maternity unit at Great Western Hospital (GWH), Swindon, implemented a change in policy to use intramuscular syntocinon for the active management of the third stage of labour. A retrospective comparative study was carried out to assess the incidence the postpartum haemorrhages (PPH) in the 6 months before the change of policy and the 6 months following.
Methods: All patients who delivered within the GWH, with an estimated blood loss (EBL) of 1500 mL or more in 2011 were considered. Patients were excluded if they delivered at home and were transferred into the unit postpartum, or if notes were incomplete. The cases were considered in two groups, comparing those from January until June 2011, when syntometrine was the standard third stage drug, to those from July until December 2011, when syntocinon was used.
Results: In 2011, 63 cases were identified with an EBL of 1500 mL or more. Fifty-eight cases fulfilled the inclusion requirements, 21 in the first 6 months, and 37 in the 6 months following the policy change. In the 6 months preceding the change in policy, PPHs occurred in 0.98% of deliveries. In the following 6 months, 1.62% of deliveries resulted in a PPH. In the time frames, the normal vaginal delivery rate was comparable (52.4% vs. 51.4%). There were less inductions in the second 6 month period (23.8% vs. 16.2%).
Conclusions: The CMACE report suggests that syntocinon is used as the third stage drug of choice. This study suggests that following the switch to syntocinon, the incidence of PPH has increased, without an increase in other recognised risk factors. It may now be more appropriate to consider patients on an individual basis, as significant morbidity can occur from PPH.
Reference: 1. Saving Mothers' Lives: Reviewing maternal deaths to make motherhood safer: 2006–2008. BJOG: An International Journal of Obstetrics & Gynaecology, 2011; 118:1–203. doi:10.1111/j.1471-0528.2010.02847.x.

P1.134
Caesarean section at maternal request – a patient perspective

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Aim: Caesarean section (CS) rates around the world over are rising. CS at maternal demand is also on the rise which is a cause for concern. Farwaniya Hospital, Kuwait also reflects the same trend. A questionnaire survey was designed study the patient perspective on the issue. We were looking for answers to: (i) What were the common motivating factors for requesting CS? (ii) Did previous child-birth experience have an impact on current decision?
Methods: Sixty-one patients who opted for CS as the mode of delivery were interviewed and their responses recorded on a questionnaire. Their age, ethnicity, occupation, level of education, previous child-birth experience, medical and gynecological history, reasons for opting CS, desired family size and knowledge of risks were all recorded. The data was analysed using SPSS software. Test of significance used was chi-square test.
Results: Forty-one patients (67.2%) of the patients had a previous CS, 13 patients (21.3%) had previous normal deliveries. Seven (11.47%) had Instrumental deliveries. The most common reasons for opting for CS were as follows. Fear of child-birth-29 (47.5%) was the commonest reason followed by high social premium on baby-13 (21.3%), the others included difficult labour-8 (13.1%), convenience-5 (8.2%), previous CS (as the only reason)-6 (9.8%). Out of the 29 patients who cited fear as the motivating factor for 7 (24%) had delivered vaginally and all of them said they had a bad experience in labour. Among the 32 Patients who cited other reasons, 11 (34.37%) delivered vaginally and three (27.2%) had a bad experience overall. Among patients who cited fear as the primary reason the incidence of bad labour experience was significantly higher when compared to those who gave other reasons. Use of epidural anesthesia in both the groups was too small to test for significance. Out of the 13 patients who cited high social premium on baby as a reason, four (31%) had history of infertility which was significantly higher than those who gave other reasons ($P < 0.001$)
Conclusions: (i) One of the primary motivating factors which propel women to opt for a caesarian section seems to be a fear of child-birth. (ii) Patients with a history of infertility tend to opt for CS as a mode of delivery. (iii) Better prenatal counselling and labour anaesthesia services may be one of.

P1.135
Reduced fetal movements: an important predictor of fetal compromise

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Objective: Maternal satisfaction with perceived fetal movements is a good predictor of fetal well being. The aim of this case report is to raise awareness among healthcare professionals regarding the importance of monitoring pregnant woman after first episode of reduced fetal movements.
Methods: Case report.
Results: First case is of a 30 years old, gravida 2, para one woman, who was rhesus negative with rhesus positive partner. She achieved vaginal delivery in her first pregnancy after induction of labour at term because of mild preeclampsia. Her booking blood investigations were normal with normal combined test for down's syndrome screening in index pregnancy. She had received routine anti D prophylaxis. She was normotensive with no signs or

symptoms of pre-eclampsia. She presented at 35 weeks with reduced fetal movements for 48 h. There was no history of bleeding per vaginum, abdominal pain or abdominal trauma. Symphysis fundal height was equivalent to gestation age. CTG was pathological with sinusoidal trace. A very pale baby was delivered with haemoglobin of 3.6 gm % at birth by category 1 caesarean section. Kleihauer test revealed 71 mL of fetal cells in maternal circulation. Baby was admitted to neonatal unit and made good recovery after receiving blood transfusion. The investigations concluded it as a case of severe, acute and spontaneous fetomaternal haemorrhage. Second case is of a 35 years old gravida 3, para 2 woman. Her booking blood investigations were normal. Combined test for down's syndrome screening revealed raised nuchal translucency (4.5 mm). Subsequent chorionic villous sampling and fetal anomaly scan were normal. She presented at 34 weeks with history of reduced fetal movements for 48 h. CTG monitoring showed sinusoidal trace. An ultrasound scan showed gross hydrops. Baby was delivered by emergency caesarean section with abnormal cord gases and required resuscitation. He made a slow but good recovery. Investigations concluded chylothorax.
Conclusion: Every unit should have a local protocol consistent with national guidance on reduced fetal movements. All pregnant women should be given information about the importance of satisfactory fetal movements at booking and this should be checked at each antenatal visit in third trimester. Women with additional risk factors should be monitored closely with provision of written information at booking visit.

P1.136
A 1 year retrospective review of outcomes of teenage pregnancy

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Objective: The World Health Organization (WHO) defines teenage pregnancy as pregnancy in women aged 10–19 years of age. There is a significant increase in teenage pregnancy at our centre. We have reviewed all our teenage mothers who delivered in 2011 and looked at the outcome of the pregnancy in relation to complications to both mother and baby.
Methods: We retrospectively reviewed all the mothers who delivered at the age of 19 years and below for the year 2011. A total of 82 patients were identified who met the above criteria. We looked at marital status, racial distribution, timing of booking, pregnancy related problems, intrapartum, postpartum as well as fetal outcome.
Results: The incidence of teenage pregnancy at our centre is 15.6 per 1000 births. Birth rates among different ethnics groups were; Malays 47 (57.3%), Chinese 21 (25.6%), Indians six (7.3%) and foreigners five (6.1%). There were seven cases which were un-booked (8.5%) with 54 cases (65.8%) having late bookings, with a median gestation of 22 weeks at booking. The most common pregnancy related illness was anaemia (Hb < 10 g/dL) which involved 31 cases (37.8%) followed by gestational diabetes and hypertension – three cases each (3.6%). The median age of delivery was 19 years old, where 42.6% of the female were single prior to delivery. Most delivered via spontaneous vaginal delivery – 63 cases (76.9%) with only 19 cases (23.1%) delivered via caesarean section. This is comparatively lower than the caesarean rates for adults at our centre (30.8%). The incidence of low birthweight (<2500 g) is 20 cases (24.3%) however the overall median birthweight is 2800 g with median age of 38 weeks gestation at delivery.
Conclusion: The incidence of teenage pregnancy is 15.6 per 1000 live births females which are higher compared to the Malaysian incidence of 12.6 per 1000 live birth (MDG 5 data, 2005). Of particular concern were the high rates of single parents (42.6%). This possibly led to higher incidence of late bookings as well as future social problems. This explains the higher incidence of anaemia in teenage pregnancy (37.8%) which was reported in several studies worldwide. There appears to be no significant increase in other pregnancy related illness (gestational diabetes, hypertension), intrapartum and postpartum (low birthweight or premature delivery) related complications. There is also no increase in caesarean section rates and as compared to adults. The results of our review are consistent with a report done by UNICEF, 2004.

P1.137
The use of oxytocin in management of delay in first stage of labour

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Background: Delay in established first stage of labour is defined as cervical dilation of <2 cm in 4 h, taking into account descent and rotation of fetal head and change in uterine contraction.
Objective: This audit aims to highlight the performance of our delivery suite of a district general hospital in documentating and managing delayed first stage of labour in primiparous women using oxytocin (syntocinon) as recommended by the National Institute for Health and Clinical Excellence (NICE)[1] and CNST (Clinical Negligence Scheme for Trusts).
Methods: Retrospective data was collected over 6 months (MayOct 2011) using an audit proforma. Primiparous patients in spontaneous labour at term who had syntocinon in labour were identified through Evolution maternity data system. Exclusion criteria included induction of labour, multiple pregnancy and intrauterine demise. A total of 25 patients were included in this audit.
Results: Four (16%) patients were transferred from the midwifery-led unit 24 km away, however, only one patient was assessed by an obstetric registrar within 30 min of arrival as required. Eleven (44%) patients were reassessed 2 h after suspected delay as recommended, one patient had delayed assessment after 3 h while 13 (52%) patients were started straight on syntocinon infusion. Eight (32%) patients had epidural prior to commencing syntocinon. Twelve percent patients were not commenced on syntocinon within 1 h of decision as stipulated due to delay in establishing epidural. One hundred percent patients had continuous CTG monitoring with syntocinon and syntocinon titration was as per unit protocol.[2] There was poor documentation of diagnosis of delayed labour (44% documented)

and discussion of syntocinon with patient (0% documented). All patients had vaginal assessment within 4 h from regular contraction with syntocinon; 52% patients were assessed earlier (within 2 h) on clinical judgement. Following delayed first stage of labour, 16 (64%) patients achieved normal vaginal delivery, five (20%) patients had forceps or vacuum delivery while four (16%) patients had caesarean section.

Conclusion: The delivery outcomes support that the use of syntocinon quickens labour but does not increase the likelihood of caesarean section (does not alter mode of delivery). There was generally no delay in management of delayed first stage of labour in line with NICE recommendations, although a more active approach was used in 52% of patients. A pre-printed sticker has now been designed to improve the poor documentation highlighted by this audit.

References:

1. NICE guideline 55: Intrapartum care (September 2007).
2. North Tees & Hartlepool Trust guideline M32: Management of delay in labour (February 2009).

P1.138

Ruptured subcapsular liver haematoma in pregnancy: a case report of conservative surgical management

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Objective: To present a case of ruptured subcapsular liver haematoma (SLH) in a pregnant lady with Haemolysis, Elevated Liver Enzymes, and Low Platelets (HELLP) syndrome who responded favourably to conservative surgical management limited to sealing of the hepatic rent with bioabsorbable gelatin sponge (Gelfoam) application. Thus a multidisciplinary approach, adequate blood transfusion, and less aggressive surgical management play a crucial role in improving the survival of these patients.

Methods: Presenting a case report of a 34 year old multiparous lady at 35 weeks of gestation with ruptured SLH secondary to HELLP syndrome. An emergency Lower Segment Cesaerean Section (LSCS) with upper abdomen exploration revealed a haemoperitoneum of 500 mL and a large subcapsular haematoma in the right lobe of the liver involving segments IVb, V, VI, VII. Breach in the Glisson's capsule was noted which was sealed with Gelfoam and 28 French (Fr) chest tube drain was placed in right subhepatic region. Ten units of blood products were transfused intra- and post-operatively. Antihypertensives, prophylactic magnesium sulphate and broad spectrum antibiotics were continued postoperatively. Assistance of a Haematologist, Surgical Gastroenterologist and Anaesthetist was sought in the management of this case.

Results and Conclusion: Ultrasound (USG) was done on the 5th post-operative day (POD) which showed same sized subhepatic collection with internal septation. There was no evidence of haemoperitoneum. Drain was removed on the 5th POD. Mother and Baby were discharged on 12th POD. USG done 4 months post procedure revealed complete resolution of the subhepatic collection. Patient came for regular follow up for one year and was asymptomatic. Rupture of subcapsular liver haematoma (SLH) is a potentially lethal complication mainly associated with HELLP syndrome. It carries a high maternal and fetal mortality. Multiple therapeutic modalities have been described and the optimal management is still evolving. Recently however surgical and obstetric literature has discussed conservative management.[1] Ruptured SLH in most cases is managed surgically but the mortality is high upto 50% of all patients.[2] In a haemodynamically stable patient as conservative a management as possible improves survival.

References:

1. Carison KL, Bader CL. Ruptured subcapsular liver haematoma in pregnancy:a case report of non surgical management. Am J Obstet Gynecol 2004;190(2):558–602.
2. Bis KA, Waxman B. Rupture of the liver associated with pregnancy: A review of the literature and report of two cases. Ostet Gynecol Surg 1976;31:763–73.

[Correction added on 16 August 2013, after online publication. The author name for P1.138 was initially noted incorrectly.]

P1.139

Are blood products utilised appropriately in postnatal wards? An analysis

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Introduction: Blood transfusion though life saving is not without hazards. Due to safety concerns restrictive blood transfusion policy is being promoted and has been shown to be effective in many studies.

Objective: To analyse the utilisation of blood products in the postnatal wards.

Methods: A retrospective study for a period of 6 months from June 2010 to November 2010 was undertaken. Women who received blood transfusion in the postnatal wards were included in the study. Women who received blood transfusion in the labour ward but not in the postnatal wards were excluded from the study.

Results: Blood transfusion was recommended for 36 women with postpartum anaemia. These women were clinically stable with no evidence of ongoing haemorrhage or underlying medical condition. Red cell units were ordered for all 36 women but only 33 women (92%) accepted transfusion. Pretransfusion haemoglobin was <7.0 g/dL in 19 women (58%) and >7.0 g/dL in 14 women (42%). A total of 142 red cell units were ordered but only 99 units (70%) were utilised. Post transfusion haemoglobin was >10.0 g/dL in eight women (24%), >9.0 g/dL in 13 women (39%) and in 12 women it was <7.0 g/dL (37%) but they were asymptomatic. Red cell units ordered were completely utilised in 15 women (42%). In 21 women (58%) cross matched blood was underutilised. Forty-three units of red cells (30%) were wasted.

Conclusion: This audit has demonstrated underutilisation of red cell units that were ordered in the postnatal wards leading to significant wastage. Decision to transfuse should be based on clinical symptoms and signs rather than haemoglobin value alone. In clinically stable patients, a minimum number of red cell units(one or two) should be ordered. Following transfusion of

each unit the need for further transfusion has to be evaluated. Alternative therapy can be considered if the patient is asymptomatic. A local guideline has been drafted as a result of these findings.

P1.140
Impact of newly designed obstetric high dependency unit in a tertiary referral centre

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Background: Confidential enquiries into maternal deaths have recommended provision of a dedicated on-site obstetric high dependency care unit for safer birth.[1]
Objective: To assess the effective utilisation of the two obstetric high dependency care beds in our newly designed High Dependency Unit (HDU) after the merger of two hospitals in Glasgow in January 2010.
Methods: A retrospective analysis of all the admissions to Obstetric HDU was undertaken for a period of one year from June 2010 to June 2011.
Results: There were 6359 deliveries and 165 admissions to HDU (2.6%) during the study period. One hundred and twenty-two case notes (74%) were available for analysis. Antenatal admissions were 17 (14%) and postnatal admissions were 105 (86%). Seventy-seven women (63%) were primigravida and 45 women (37%) were multiparous. The main indications for admission were: Major haemorrhage 43% (52), Hypertensive disorders of pregnancy 26% (32), Medical disorders 27% (33) predominantly cardiac, Anaesthetic reasons 3% (4) and Surgical cause 1% (1). Invasive monitoring with CVP was undertaken for 12 women (10%) and 32 women (26%) required arterial line. The length of stay ranged between <1 and 8 days. The stay was <1 day in 68% (83), between 1 and 2 days in 24% (29), 3 days in 2% (3) and >3 days in 6% (7). Three women (2.4%) were transferred to ICU and two women (1.6%) were readmitted to HDU.
Conclusion: The admission rate to our obstetric HDU was 2.6%. Major haemorrhage was the commonest cause. It was interesting to note that the medical disorders complicating pregnancy and hypertensive disorders of pregnancy contributed almost equally to the admissions to the HDU. The mean length of stay was 1.38 days. Only a low proportion of women were transferred to ICU and this reflects our effective utilisation of the obstetric HDU facility.[2] The results of this first study will assist in our staff training and work force planning to potentially reduce the mean length of stay and readmissions to HDU.
References:
1. Safer Childbirth – RCOG 2007.
2. Progress in Obstetrics and Gynaecology 17, 85.

P1.141
Non-Hodgkin lymphoma (NHL) in the puerperium – a rare case

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Introduction: Non-Hodgkin lymphoma (NHL) is rare and infrequently diagnosed in the puerperium. It can present as primary lymph node or extra-nodal disease. Non specific symptoms of this condition can cause a diagnostic dilemma leading to delay in initiation of treatment. We are reporting a case of NHL during peurperium with no similar case reports in the literature.
Case Report: A 29 year old nulliparous woman had an emergency caeserean section for fetal distress. The postoperative recovery was uneventful. She presented 5 weeks later feeling generally unwell with night sweats, abdominal pain and a palpable tender abdominal mass in the left para umbilical region measuring 10–12 cm. Ultrasound revealed $14 \times 7 \times 12$ cm mass anterior to the aorta suggestive of para aortic lymphadenopathy. Subsequent CT scan showed abdominal lymphadenopathy with large nodules anterior to aorta extending into the left flank. The appearance was consistent with lymphoma. Laparoscopic biopsy and histology confirmed diffuse large B cell lymphoma. Staging bone marrow trephine immunochemistry showed marrow involvement consistent with stage IV disease. She received chemotherapy to which there was good response.
Discusssion: Diffuse large B-cell lymphoma are fast growing aggressive tumours but with appropriate diagnosis and prompt treatment, they respond well. Five year survival for treated patients is 30%. NHL in a young woman is a management dilemma regarding ovarian preservation and chemoradiation. But in our case since she had completed her family we did not consider other fertility preserving techniques.
Conclusion: Although abdominal masses are not uncommon findings in the puerperium, NHL should be considered in the differential diagnosis.

P1.142
Primary peritoneal carcinoma found at caesarean section, value of routine abdominal examination at caesarean section

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Introduction: Primary peritoneal carcinoma (PPC) is a rare malignancy that predominantly affects postmenopausal women and typically displays multicentric peritoneal and omental involvement. Atypical presentations of primary peritoneal carcinoma have been described in english literature but as far as we are aware no reports of primary peritoneal carcinoma which were picked up at caeserean section have been published. Here we

present a case report in a young asymptomatic woman with suspicious peritoneal lesions at elective caesarean section.
Case Report: Thirty-seven years old Para 2 had an elective caesarean section for previous caesarean section. During surgery small peritoneal lesions were noted which were suspicious of endometriosis and biopsy was taken. Biopsy result was suggestive of papillary serous carcinoma of ovary. CT scan of abdomen and pelvis did not show any abnormality. Following MDT meeting she had a total abdominal hysterectomy and bilateral salpingoophrectomy with pelvic clearance. The histology confirmed Primary peritoneal cancer stage 3b with both ovarian and omental involvement. Subsequently she received chemotherapy.
Discussion: The well-documented but rare primary papillary serous peritoneal tumors can present as diagnostic dilemma for both the pathologists and the clinicians as primary peritoneal cancer resembles papillary serous ovarian carcinoma. The sensitivity of CT scans and ultrasound for peritoneal nodules measuring smaller than one cm is approximately 15–30%. Treatment of this malignancy is very similar to that of epithelial ovarian cancer i.e. combination chemotherapy after optimal cytoreductive surgery. The goals of chemotherapy are to induce remission, to prevent complications, and to reduce morbidity. Different studies quote the 5-year survival rates as 26.5–47%.
Conclusion: Direct visualisation of the peritoneal surfaces along with palpation of the abdominal cavity is by far the most sensitive modality for detecting primary peritoneal cancer. Caesarean section is an opportunity for direct visualisation and examination of pelvic organs and peritoneal surface, and any suspicious lesions should be biopsied.

P1.143
Maternal obesity and obstetric outcomes
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Objective: To find the prevalence of obesity in pregnant women attending Shoalhaven District Memorial Hospital. To assess the effect of maternal obesity on mode of delivery and complication rates.
Setting: District Hospital in Shoalhaven region in New South Wales, Australia.
Methods: Retrospective review of all deliveries over a period of 12 months between October 2010 and September 2011 to find the number of women with BMI > 30. In this group, obstetric outcome in relation to mode of delivery, gestational age, blood loss, birthweight and major complication were analysed. Data was obtained from database (Obstetrix).
Results: Eight hundred and eighty-six women delivered during the study period. Of these 166 women had a BMI of >30 at booking. Eighty-three women did not have their BMI recorded. Prevalence of maternal obesity was 20.75%. 12.7% had preterm delivery. Caesarean section rate was very high (52.4%) in the obese women compared to that in non-obese women (27%). Postpartum haemorrhage of >500 mL was recorded in 28.9%. Babies born to obese women weighed >4 kg in 19.3% while only 3% were <2.5 kg. During the study period 2 women underwent hysterectomy and both of them were morbidly obese.
Conclusion: Maternal obesity is a risk factor for caesarean section. Preventing obesity by effective pre pregnancy interventions could reduce caesarean section rates.

P1.144
The impact of intrapartum pethidine on the neonatal outcome. a prospective review
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Objective: To study the effect of intrapartum pethidine administration on the fetal heart rate pattern and neonatal outcome.
Methods: This is a prospective observational study done on forty low risk uncomplicated pregnancy at term in the first stage of labour. The study was done in the labour suite in Hospital Tengku Ampuan Afzan Kuantan, Malaysia. Intramuscular Pethidine 1 mg/kg was given as intrapartum analgesia to all consented patient with normal baseline fetal heart rate and clear liquor. Intrapartum fetal heart rate pattern and neonatal outcome were reviewed and analysed by SSPS 17.0.
Results: Total of 40 patients recruited in this study with mean age of 27.9 ± 6.03 years and mean gestational age of 39.0 ± 0.81 weeks. The mean duration from pethidine administration to delivery is 285.5 ± 178.9 min (4 h and 45 min). Out of 40 patients, two (5%) cases had suspicious CTG 1 h post pethidine administration, first one with absence of acceleration and the second with early deceleration which lasted for 45 min and 1 h respectively. All neonates delivered with good Apgar Score, 8 at 1 min and 9 at 5 min. A total of nine (22.5%) cases were admitted to the Neonatal Intensive Care Unit (NICU). Seven (17.5%) cases were admitted for observation because of delivery <4 h after pethidine administration, following the neonatal protocol at our centre. Two (5%) cases were admitted for G6PD. Neither required ventilation nor antidotes. All of them were discharged to mother after 24 h apart from those admitted because of G6PD.
Conclusion: Intrapartum pethidine is still an analgesic option which is simple, cheap and easily available without major effect to the fetal heart rate pattern and the neonatal outcome.

P1.145
Primiparous labour: an audit of management & outcomes at the Royal Hampshire County Hospital, Winchester, UK
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Background: The caesarean section (CS) rate in Winchester is 26% compared to the UK national rate of 24%. There is therefore

a drive to decrease the CS rate. Primiparous women can be targeted by avoiding the first CS. Labour management aims to optimise the chance of vaginal delivery.
Objective: To evaluate intrapartum management of primiparous women and to gain local outcome data to assist in their counselling.
Standards: Derived from local labour ward guidelines and NICE Intrapartum Care Guideline 2007.
Methods: Retrospective case note audit of 141 primiparous singleton term labourers for the 3 month period from January to March 2010.
Results: The audit showed 41% spontaneous vaginal delivery (SVD), 35% instrumental & 24% CS rates. The epidural rate was 46%. There were lower SVD and higher CS rates for women with epidural versus non-epidural analgesia. Twenty-one percent women were diagnosed with delay in the first and 27% in the second stage of labour. Twenty-four percent required syntocinon for delay with a mean time of 55 min from prescription to commencement. Women with delays of >60 min to commence syntocinon had higher rates of operative delivery for failure to progress (73% vs. 38%). Only 60% women contracting <3:10 in 2nd stage commenced syntocinon augmentation.
Discussion: The audit highlighted good provision of one-to-one care (95%) and appropriate use of both ARM (89%) and vaginal examinations. Deficiencies in the IOL process, including timings from prescription to commencement of syntocinon intravenous infusion, and lack of 2nd stage syntocinon use were noted. Reducing the epidural rate in primps might increase SVD and reduce operative delivery rates.
Recommendation: (i) Steps to accelerate the induction process. ARM at 0600 h by the night Registrar followed by syntocinon augmentation at 1 h. (ii) Staff education regarding syntocinon use in 2nd stage. (iii) Reduce epidural rate by patient education. Re-audit is planned for 6 months to assess the impact of this change in practice on CS rate.

P1.146
Observational study to determine if chorionicity in planned vaginal delivery affects labour and neonatal outcome

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Objective: To determine if chorionicity affects labour and neonatal outcome.
Methods: Prospective observational study on twin births delivered at 36 weeks in the largest maternity unit in Malaysia from January to December, 2009. All twin pregnancies which was planned for vaginal delivery (VD) and delivered within the study period were included. Monochrionic monoamniotic (MCMA) and TTTS were excluded in this study. Primary outcome was a measure on the labour and neonatal outcome.
Results: A total of 71 sets of twins were included in the study with 42 sets are Monochorionic Diamniotic (MCDA) and 29 sets Dichorionic Diamniotic (DCDA). In the earlier group (MCDA), 32 sets (76.2%) had successful VD with 20 sets (69.0%) in the later group (DCDA). Total of 19 sets of twin went through emergency caesarean delivery which included 10 cases (23.8%) from MCDA and 9 (31.0%) from DCDA group. The commonest indication of emergency caesarean was fetal distress for MCDA twin (19.0%) and poor progress for DCDA group (17.2%). With regard to the perinatal outcomes, there were no statistically significant differences between different chorionicity. Mean birthweight for twin siblings were similar among each group. MCDA twin had mean birthweight of 2.33 kg for 1st twin and 2.34 kg for 2nd twin. DCDA twin had mean weight of 2.54 kg for 1st twin and 2.51 kg for 2nd twin. The neonatal outcomes were similar among twin siblings in both chorionicity. No infant in either group has 5-min Apgar score of below eight. The mean umbilical arterial pH per twin for the MCDA group was 7.32 (SD 0.061), and for the DCDA group was 7.31 (SD 0.074), $P = 0.123$. The mean intra-pair difference in the umbilical arterial pH for the MCDA group was 0.032 (SD 0.057), and for the DCDA group was 0.047 (SD 0.083), $P = 0.215$. Mean base excess for 1st twin was −3.24 for MCDA and −3.79 for DCDA twin whereas for 2nd twin was −5.00 in MCDA and −5.79 in DCDA group. Similar results were also noted in twin pregnancies that had emergency caesarean section in which there were no significant differences of perinatal outcomes between twin siblings.
Conclusion: Chorionicity does not seem to be a factor that influences the labour and neonatal outcome in planned vaginal delivery in twin pregnancy where there is no obvious fetal compromise.

P1.147
Management of narcolepsy and cataplexy in pregnancy – a case report

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We report the management of a patient who suffers from narcolepsy and cataplexy who presented to the clinic at 14 weeks of gestation. Her symptoms were resistant to Modafonil but controlled with clomipramine and amphetamine. The mode of delivery for these patients is scarce in the literature. We discuss some issues surrounding the antenatal management and counselling regarding mode of delivery and postpartum care.
Case Report: A 44 year old G3 Para1 (Previous normal vaginal delivery at term) with a past history of Narcolepsy and Cataplexy was referred to the combined medical/obstetrics antenatal clinic at 14 weeks gestation. Narcolepsy and cataplexy was diagnosed in January 2005 with tissue typing and she was managed by a neurologist. Patient had developed day time sleepiness, cataplexy, sleep paralysis and hallucination on going to sleep. Cataplexy was controlled with clomipramine and amphetamine (Dexamphetamine) was started in Nov 2010 when her symptoms worsened. Symptoms were resistant to Modafonil. Patient was managed in conjunction with the Neurologist and referral was made to the anaesthetist and paediatric alert was made in view of amphetamine use in early pregnancy. Patient continued to make progress and dose of dexamphetamine reduced in the course of

the pregnancy and eventually discontinued at 24 weeks of gestation. She was reviewed by the anaesthetist at about 36 weeks of gestation who had concerns regarding option of analgesia and mode of delivery if she presents in labour. Patient was seen by the Consultant Obstetrician and after weighing the benefits and risks and with the patient's agreement opted for delivery by an elective caesarean section. The caesarean section was uneventful and was done under spinal analgesia. A female baby weighing 2.84 kg was delivered with Apgar's score 7, 10, 10 at 1, 5 and 10th min of life. Cord gases were pH (A) 7.361 BE-6.1, pH (V) 7.383 BE-2.8. Baby cried spontaneously after birth needing little resuscitation. Neonatal Abstinence Syndrome (NAS) scoring was not required for baby. The postnatal recovery was uneventful.

P1.148
Postpartum maternal morbidities and the productivity cost

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Postpartum maternal morbidity is an important condition that has to be promptly dealt with, in order to uplift maternal and child health care service provision. Despite its importance, limited information is available with regard to postpartum maternal morbidity, owing to the difficulty in defining, interpreting and measuring maternal morbidity. The present study was carried out with the purpose of determining the prevalence of postpartum maternal morbidities and their effects in relation to the number of days affected the need for medical care and hospitalisation. A community based descriptive cross sectional study was carried out in Anuradhapura district. Study population included postpartum mothers residing in the area who had delivered a live baby within the past 6 months during the study period. Study participants were recruited by using a two stage cluster sampling technique. Data collection was carried out by using a structured interviewer administered questionnaire with the informed written consent of the participants. A total of 374 mothers were interviewed and the mean age of the participants were 28 years. (SD 5.4 years) 83.1% of mothers (n = 311) were housewives. Out of 374, 170 mothers (45.45%) have had at least one episode of ill health during the postpartum period. Amongst them 26 mothers (15.3%) have had more than one episode of maternal morbidities. Altogether there were 192 different episodes of postpartum maternal morbidity. Lower abdominal pain (10.9%), severe pain at episiotomy site (9.6%), infection of surgical wound (5.1%) or episiotomy site (3.5%) were the commonest postpartum maternal ill health conditions amongst the study participants. The 170 mothers who were suffering from any ill health condition reported a total loss of 3179 due to ill health with a mean of 20.1 days. Most debilitating illness reported was infected LSCS site wih a mean productivity lossof 19.3 days per episode. Lower abdominal pain (18.7 days per episode), pain in episiotomy scar (15.6 days) and infected episiotomy site (12.3 days) were the other main causes of productivity loss. Amongst the 192 episodes of postpartum maternal morbidity 54.7% (n = 105) of episodes necessitated medical care. Only 15.1% (n = 29) necessitated hospitalization. Productivity losses due to postpartum morbidity have a significant impact on womens, families and societies.

P1.149
Fetal outcome of prenatally diagnosed congenital abnormality. A retrospective study

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Objective: To study the prevalence of congenital anomalies detected antenatally in University Malaya Medical Centre, Kuala Lumpur (UMMC) in the year 2009. To assess the different types of fetal anomalies and the neonatal outcome of these pregnancies.
Methods: This was a retrospective study conducted from 18th October to 10th December 2010 in UMMC. Data was collected from medical records of patients who were diagnosed with congenital fetal abnormalities between 1st January and 31st December 2009. Further information was gathered from records in the Antenatal Ultrasound Department.
Results: A total of 111 cases had antenatally diagnosed congenital abnormalities. Sixty-eight percent were Malays, 29% were Chinese and 3% were Indians and Others. Fifty-eight percent of mothers presented between 21 and 30 years old and 43% were primigravida patients. Sixty-seven percent of the patients had no prior obstetric history while 21% had a history of previous miscarriage. Only 2% had preexisting type 2 diabetes mellitus. Twenty-two percent had multiple congenital abnormalities. Twenty percent had CNS abnormalities, 13% had cardiovascular anomalies, 9% genitourinary abnormalities, 7% hydrops fetalis and 5% had gastrointestinal abnormalities. Four percent had thoracic anomalies and 4% limb defects and 3% cleft lip/palate 18% of the mothers underwent termination of pregnancy, 40% were live births, 14% were intrauterine deaths while 12% were neonatal deaths. Data was missing for 16% as these patients defaulted follow up at UMMC. Among the live births, the fetal anomalies detected were as follows: central nervous system (29.5%), renal (20%), cardiovascular (13.6%), thoracic (13.6%), abdominal (4.5%), limb (6.8%) facial (2%) and multiple anomalies (9%).
Conclusion: Antenatal diagnosis of lethal congenital anomalies enables important issues such as early termination of pregnancy to be discussed with the couple. Counselling of parents and family of the affected fetus regarding antenatal or postnatal treatment as well as management during pregnancy and delivery can also occur. As these cases are usually deemed high risk pregnancies, referral to a tertiary centre where a multidisciplinary team is available is likely to improve the neonatal prognosis and survival.

P1.150

How useful is ultrasonography in predicting fetal outcome in pregnant women who perceived decreased fetal movement in low risk population – systematic review

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Background: Fetal activity is recognised has the first sign of fetal life and is regarded as a manifestation of fetal wellbeing. Decrease fetal movement (DFM) is an indicator for pregnancies at increased risk of adverse outcomes. Studies have reported associations between DFM and low birthweight, oligohydramnios, preterm birth, placental insufficiencies, inductions of labour and emergency caesarean sections and stillbirths. Fetal growth restriction is a significant factor contributing to the increased risk in these pregnancies. Antenatal monitoring using ultrasonography or other modalities to assess fetal wellbeing are thus essential in detecting fetuses at risk of perinatal mortality.
Objective: The objective of this systematic, quantitative review of studies is to assess the clinical effectiveness of ultrasonography in predicting fetal outcome in women with decreased perception of fetal movement in low risk population.
Outcome Measures: Anhydramnios or oligohydramnios, fetal growth restriction, fetal anomaly, and abnormal Doppler velocimetry that may increase the risks of potential fetal compromise.
Methods: Literature search and data extraction on study characteristics and quality was conducted. Five studies met the inclusion criteria. The studies on management of pregnant women with decreased perception of fetal movement in low risk population are included in this systematic review.
Results: Decreased awareness of fetal movement was reported in 8454 women, of which 7209 underwent ultrasound assessment. The overall usefulness of ultrasonography in providing information after abnormality was detected in women with decreased fetal movement was 9.6%.
Conclusion: This study shows that antenatal ultrasonography of fetal biometry, amniotic fluid volume assessment and fetal morphology is useful in decreasing prenatal mortality. The use of Doppler ultrasound in low-risk pregnancies has no demonstrable benefit in reducing the risk of perinatal deaths. Although, there is no evidence to support, offering ultrasonography to all women with DFM in low risk population. However, ultrasonography is recommended as a preliminary assessment tool, if the mother is clinically small for gestational age, post date pregnancies, recurrent presentation of decreased fetal movement or if the initial assessment is not reassuring.

P1.151

Do we provide enough information for pregnant women about our services for labour and delivery? The experience of one central London hospital

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Introduction: Childbirth is one of the most memorable experiences for women, so being fully informed about all choices available can help ensure a gratifying experience for both mother and family.
Objective: To assess the knowledge of local services, labour and delivery options among pregnant women booked at St Mary's Hospital (SMH), London.
Methods: A sample of pregnant women were recruited during their antenatal visit and invited to complete written questionnaires.
Results: Fifty-six women completed the questionnaire. The sample comprised a high proportion of well educated, middle class women with an average age of 34 years in their third trimester. There was little awareness of sources of information and support outside of the hospital setting, with only 25% able to name one local/national voluntary agency/website that could provide information about pregnancy and birth options. Furthermore, <20% of those asked had attended an antenatal class, although of those, nearly half were planning to attend at some point in their pregnancy. Over half of the women asked felt that their consultant had provided most of the information about their pregnancy and only a few women (18%) knew the delivery rate at our hospital. One third of women were not sure about the delivery options available at SMH. As a result 'I'm not sure, I'd really just be guessing' was a common response for questions about normal deliveries, the healthcare professional conducting them, the amount of time mothers spent with a midwife during labour, the training of midwives, and the use of episiotomy. There was a mixed response to questions about caesarean section; these included the commonest indication, the role of the consultant in decision making and performing a caesarean section, and common complications. Similar responses were noted to questions about instrumental deliveries, indications for and carrying out induction of labour, and pain relief options available. There was an overwhelming consensus (98%) that information on all aspects of labour and delivery was very important and should be provided for all.
Conclusion: In this era of maternal choice, we must empower all pregnant women to make an informed decision about their method of delivery. It is thus vital for health care providers to provide this information at booking and discuss at each subsequent antenatal appointment. This will help strengthen the relationship between care provider and patient and address and allay anxiety many mothers face as they approach delivery.

P1.152
Outcome measures of sonographically identified large fibroids during pregnancy

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Fibroids diagnosed during routine obstetric scanning are becoming a common occurrence. It could be attributed to advancing maternal age, rising rate of obesity, and many pregnancies occurring after the treatment of fibroids.[1]

Objective: To determine the impact of sonographically identified uterine fibroids on pregnancy and neonatal outcomes.

Methods: Retrospective cohort study. Outcome measures were analysed in 48 cases of sonographically identified uterine fibroids measuring >5 cm during routine anomaly scan by trained sonographers in an inner city hospital with a high ethnic population and were compared with 50 controls.

Main Outcomes Measures: Antenatal admissions due to suspected fibroid degeneration, preterm labour, gestational age at delivery, mode of delivery, intraoperative/postpartum haemorrhage, retained placenta and neonatal outcomes.

Results: The mean age of pregnancy in the fibroid group was higher than the controls (33.87 + 4.99 years vs. 28 + 5.61 years $P = 0.0002$). In our study group 12 cases were found to have at least one fibroid of more than 10 cm identified during routine anomaly scan. During the course of pregnancy 18 cases (37.5%) had at least one antenatal admission with suspected red degeneration of fibroid and were managed conservatively. Large cervical or lower uterine segment fibroid were found in six cases warranting elective caesarean delivery. Compared to women with no fibroids or small fibroids (≤5 cm), women with large fibroids (>5 cm) delivered at a significantly earlier gestational age (38.86 + 1.40 weeks vs. 40.88 + 1.28 weeks $P = 0.004$). Operative delivery rate was higher in large fibroid group as compared to controls (56% vs. 32%). Blood loss at delivery was analysed as reported in the hospital records. It was significantly higher in the large fibroid group (50% as compared to 4%) in the control group. The incidence of retained placenta was slightly higher in the fibroid group (8% vs. 2%). No babies were admitted to neonatal unit in either group in our study.

Conclusions: Uterine fibroids increase the risk of complications during pregnancy and childbirth.[2,3] Our data demonstrates the association of increased hospital admissions, preterm delivery, increased risk of operative intervention and postpartum haemorrhage in pregnancies complicated with large uterine fibroids.

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P1.153
Timing of elective caesarean section – are we deviating from the NICE guideline?

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Aims: (i) To find out the numbers of elective caesarean section carried out before 39 weeks of gestation. (ii) To find out the number of infant morbidity resulting from variation from the NICE guideline.

Background: Studies have shown that delivery by elective caesarean section (CS) is associated with the increase risk of respiratory morbidity in the infants compared to vaginal delivery. Gestational age <39 weeks was found to be associated with increased risk for transient tachypnea of the newborn (TTN) in infants delivered by elective CS. Due to this reason, NICE guideline recommend that elective CS should not routinely be carried out before 39 weeks.

Methods: Retrospective study was carried out during 2 months period from beginning January 2011 until February 2011. NICE guideline was used as standard. Proforma was used to collect information which was then analysed.

Results: There were approximately 3184 deliveries carried out in Northumbria NHS foundation trust per year and during the 2 months study period, there were 60 elective caesarean sections. Fifteen out of 60 caesarean sections were done before 39 weeks gestations. Five out of 15 had medical reasons, two out of 15 had social reasons, and the reasons for the rest of the eight patients were unrecorded. No infants had TTN or admitted to SCBU in the women who had CS after 39 weeks. For those who had elective CS prior to 39 weeks of gestation, one infant was admitted to SCBU due to TTN.

Conclusions: One out of 60 infants develop TTN in this study and the reason for deviation from the NICE guideline was not recorded. It is very important to adhere to the NICE guideline to perform elective CS after 39 weeks to reduce TTN, unless the reason to perform elective CS prior to 39 weeks was justified and clear documentation should be done.

P1.154
Extremely high isolated maternal alkaline phosphatase serum concentration: two case reports and literature review

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Cases: We report two cases of isolated elevated alkaline phosphatase (ALP) in pregnancy. Two fit and well primigravida who are in their twenties presented with generally feeling unwell at approximately 36–37 weeks of gestation. Examination and observation were normal. Elevated serum ALP concentration was detected (3378–4570 U/L). Other laboratory tests and imaging were normal. No systemic immune disease was detected. Liver ultrasonographic examination was normal. Obstetrical

ultrasonogrpahic examination and Doppler blood flow remained normal. She was followed up for one week with daily fetal monitoring using cardiotocography. Serum ALP electrophoresis showed normal ALP level of liver and bone origin, whereas placental isozyme 1 ALP and placental isozyme 2 ALP were elevated. Deliveries were induced at 38 weeks of gestation and healthy infants were delivered. The histology of the placenta was unremarkable. Serum ALP level returned to normal at 7 weeks postpartum.

Discussion: ALP is an enzyme produced by liver, bones, kidneys, small intestine and placenta. In a pregnant patient, elevation of ALP may be related to HELLP syndrome, intrahepatic cholestasis, malignancy and liver or bone diseases. However, a placental origin of ALP must be discussed. ALP is physiologically produced by placenta at the brush border membranes of the syncytiotrophoblast. It appears in maternal serum between the 15th and the 26th weeks and increases during the third trimester. Usually, ALP production or diffusion in maternal serum is not major and total serum ALP level remains normal. Some cases of unusual elevation of placental ALP have been described. The mechanism of serum placental ALP increase is not well understood. A genetic abnormality has been suspected in one case and a link with a risk of preterm delivery has been discussed. With regard to our cases, we have excluded liver, kidney, bone, and immunological diseases, in addition to thyroid dysfunction. Intrauterine growth retardation, pre-eclampsia, and Down's syndrome were also excluded. The mothers did not smoke and was not undergoing drug treatment. A study done in Hungary looked at the histopathological examination of placenta in pregnant woman with isolated high ALP. Compared with controls, the affected placenta showed greater cytotrophoblastic proliferation and raised concentration of protein kinases with important role in cell differentiation. When a raised serum ALP concentration is present during pregnancy, differential diagnosis of other conditions must be excluded. Precise monitoring of fetal and maternal conditions, histopathological examination of the placenta, and postnatal follow up of declining.

P1.155
Bakri balloon tamponade in massive obstetric haemorrhage

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Massive obstetric hemorrhage, defined by blood loss of >1500 mL include postpartum hemorrhage (PPH) and early pregnancy complications. Bakri balloon tamponade has been shown to provide temporary reduction of postpartum uterine bleeding following unsuccessful management with uterotonic agents, repair of genital tract laceration or removal of retained product of conception, thus reducing the necessity for hysterectomy.

Objective: To determine the efficacy of Bakri balloon tamponade in management of obstetric haemorrhage with avoidance of hysterectomy and maternal death.

Methods: A retrospective review of all massive postpartum hemorrhage in University Kebangsaan Malaysia Medical Centre (UKMMC) between 1st of January 2009 and 31st October 2011. Data collection was obtained from delivery and maternity operative records and patients' medical records. All cases were unsuccessfully managed with first line uterotonic agents.

Results: Fifty-six cases of massive obstetric hemorrhage were identified. Fourteen patients were managed with Bakri balloon. Seventy-nine percent (11) had bleeding successfully arrested with Bakri balloon tamponade. Two underwent peripartum hysterectomies following continuous hemorrhage and one failure of insertion. No maternal death reported. Mean age was 33.2 ± 4.7 years and mean gestational age reported was 34.4 ± 11.6 weeks. Four had vaginal delivery, one vacuum assisted delivery, six lower segment caesarean sections, three cases of evacuation of retained products of conception; one molar and two incomplete miscarriage. Majority of massive hemorrhage was due to primary PPH (64%, $n = 9$). Fifty percent were attributed to uterine atony followed by cervical laceration in two cases. Mean blood loss prior to Bakri Balloon insertion was 1300 ± 333 mL, ranged from 1500 to 5500 mL. Total blood transfusion ranged from 500 to 5000 mL. Mean volume of normal saline inflated was 285 ± 145 mL and mean balloon duration in situ was 24 ± 16 h. All balloons insertions were by antegrade approach under ultrasound guidance. Three insertions were aided with uterine sounds and one balloon placement in the vagina has been ensured with use of tampon. Various method of removal has been reported inclusive of removing 5 cc to 250 cc.

Conclusion: Bakri balloon tamponade reported high success rate of almost 80%. It is a reliable alternative in management of massive obstetrics hemorrhage following failure of first line uterotonic agents with avoidance of surgical intervention.

P1.156
Bell's palsy during pregnancy: a case report

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Bell's palsy (BP) is a benign lower motor neuron facial nerve disorder and the most common and frequent cause of unilateral facial nerve paralysis, accounting for approximately 80% of cases. The incidence of BP during pregnancy and early puerperium is 45.1 per 100 000, compared with 17 per 100 000 observed within the general population. Pregnant women are calculated to have a six-fold higher incidence of BP compared with non-pregnant women. However, a review of recent medical literature revealed a paucity of advice on how to treat BP in pregnancy – corticosteroids have been shown to be of benefit but carry risks, and antivirals remain controversial. We report a 21-year-old gravida 3 para 0 + 2 woman with sudden onset BP as a way to discuss the aetiology, diagnosis and management of this uncommon complication of pregnancy.

P1.157
Negative GTT in pregnancy following GDM pregnancy: what are the outcomes?

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Women with previous GDM in pregnancy and had a negative GTT at 26 weeks were identified from diabetic database as well as from the electronic records of a teaching trust in the United Kingdom. Sixty-one women were identified. Five cases are awaiting their second GTT. Six women have not delivered yet. Two records could not be found. Forty-seven cases were reviewed. The study proforma recorded the age, parity, smoking, previous miscarriage status, any antenatal complications, pregnancy outcome, gestation including mode of delivery. Perinatal outcome including gestation at delivery, SCBU admission, shoulder dystocia, meconium staining, GBS and adverse outcomes

Main Outcome Measures: (i) Ethnicity and age (ii) BMI (iii) Smoking status (iv) IOL spontaneous onset of labour (v) Mode of delivery (vi) Perinatal outcome (vii) Adverse outcomes.

Results: Forty-seven women were selected for analysis from the databases one from 200-to 2007 (310 patients) and other database from 2007 to 2009 (274 patients). The number of women was 584. Previous studies have identified that the frequency of recurrent GDM in subsequent pregnancies was 45.0% (95% CI 35.6–54.4%). In our study the negative rate was 8.2% Mean age was 25.94 BMI: Thirteen women were above the BMI of 30. Parity Smoking: Only two women smoked among the group. Ethnic origin: Majority of the women were Pakistani origin. Two were Indians, three Bangladeshi and two other white and one British white. Gestation at delivery: Eight patients delivered at 41 weeks. Five patient delivered at 40 weeks and 14 patients delivered at 39 weeks 13 patients delivered at 38 weeks. Four patients delivered at 37 weeks and one patient delivered twins at 25 weeks and one had a termination at 20 weeks due to heart abnormalities Five patients were induced. Four patients had emergency section and three ha elective LSCS. In total only seven patients had operative delivery, which is 14% of the total number of patients. Forty patients had normal vaginal delivery, out of which one was a VBAC. Birthweight: Six babies above the weight of 4 kg but not more than 4.5 kg. Two IUGR babies one weighing 2.5 kg and one weighing 1.7 kg and one set of twins weighing between 730 and 660 g. Four babies had SCBU admissions. Three babies had GBS and one baby had shoulder dystocia with a weight of 4.0 kg. The percentage was 2% in the this population.

P1.158
Non-tubal ectopic pregnancies: are they as rare as reported?

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Objective: Ectopic pregnancies occur in 12% of all pregnancies. With only <10% being non-tubal ectopics, our knowledge on the diagnosis and treatment of these pregnancies is largely from small observational studies and case reports. Cervical pregnancy has a quoted incidence of one in 9000 deliveries, and caesarean scar pregnancy a prevalence of one in 2000 pregnancies.
The aim of this study was to review the incidence and management of cervical and scar pregnancies seen at Corniche Hospital (CH) Abu Dhabi, the largest maternity unit in the city.

Methods: From January 2010 to December 2011 there were five cases of cervical ectopic pregnancies and one case of caesarean scar pregnancy seen at CH. The cervical ectopic pregnancies were diagnosed by transvaginal ultrasonography. In cases with fetal cardiac activity, management was according to the UAE Abortion Law, and transabdominal intra-amniotic injection of 50 mg methotrexate with 2 mL KCl was performed under ultrasound guidance. Follow-up was by sonographic examinations and serum β-hCG levels.

Results: Incidence of cervical pregnancy was one in 3058 deliveries, and scar pregnancy was one in 15 294 deliveries. Gestational age at diagnosis ranged from 5 to 17 weeks, and β-hCG levels ranged from 974 to 114 088 IU/L. Fetal cardiac activity was present in five out of six cases. In 66% of cases medical management with methotrexate and potassium chloride was employed. Of these four medically managed cases, one needed curettage from the cervical canal 4 weeks after the medical treatment due to bleeding. One case of cervical pregnancy of 16 weeks presented with massive bleeding and was managed surgically with a laparotomy which proceeded to a hysterectomy due to massive haemorrhage. One case of cervical pregnancy of 17 weeks was lost to follow-up.

Conclusion: Early diagnosis and ultrasound guided medical management of cervical and scar pregnancies are important to preserve the future fertility of a woman and reduce maternal morbidity. This is particularly important in this region where women tend to have larger families and repeat caesarean sections. What is astounding is that despite the high rates of repeat caesarean sections seen, the incidence of scar pregnancies is not as high as we would expect. We are now looking at maternal factors as well as scar characteristics by 3D ultrasound to help determine why the incidence is low in this region.

P1.159
Twin pregnancies with co-existing complete hydatiformmole (CHM) and viable fetus

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Introduction: The incidence of twin pregnancy combining a CHM and coexistent normal placenta and fetus is one in 20 000–100 000 pregnancies. The counseling and management of such pregnancies remains controversial, due to conflicting data from different parts of the world, as well as the rarity of such cases.

Case Report: Mrs K, a 19 year old at 14 weeks of gestation, was diagnosed to have CHM with a viable fetus. The patient was counseled regarding her condition and possible management options. She elected for termination of pregnancy and the subsequent histopathological report confirmed our ultrasound diagnosis.

Discussion: Complete molar pregnancies are totally androgenousconceptus consists of a generalized swelling of the

villous tissue, diffuse trophoblastic hyperplasia, giving rise to the classical 'bunch of grape' appearance on ultrasound, and no fetal or embryonic tissue. Ultrasound is the mainstay for diagnosis andin documented twin pregnancies with coexisting CHM and viable fetus, ~50% opt for termination of pregnancy. In those continuing with pregnancy, there are increased maternal risks of pre-eclampsia, vaginal bleeding, thecal luteal cysts and hyperthyroidism. The outcome for a normal pregnancy with a coexisting complete mole is poor, with an increased risk of early fetal loss (40%) and premature delivery (36%).
Conclusion: Women with such pregnancies should bereferred to a fetal medicine unit for counseling and closer monitoring. The counseling should be patient-centred and termination of pregnancy can be offered in view of the multiple maternal and fetal risks involved. If continuation of pregnancy is decided upon, regular screening for possible maternal complications, as well as assessment of fetal well-being need to be carried out. Continuation of pregnancy is possible as long as maternal complications are monitored and fetal karyotype and development are normal.

P1.160
Curbing teenage pregnancy: where do we stand?

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Objective: To evaluate awareness of teenage pregnancy among primary and secondary school students.
Methodology: A prospective questionnaire based study carried out in schools.
Results: Two hundred questionnaires were analysed. From the analysis 50% of students were between 14 and 16 years old, 35% between 12 and 13 years, 56% were Malays, 28% Chinese and 16% Indians. All participants in this study had acquired primary education, 65% received secondary education, 42% knew the definition of teenage pregnancy, 75% had heard of teenage pregnancy. The source of information was from school teachers, internet, friends and magazines. Eighty-five percent felt teenage pregnancy can be prevented, 20% by sex education, 50% by public awareness and 15% contraception. Thirty-eight percent felt teenage pregnancy was due to parental neglect, 28% due to broken families, 12% due to school dropouts and 11% due to rape and runaways. Sixty-six percent agreed for sex education in schools. Those who didn't agree claim that 10% feel shy, 8% parents are shy, 16% parents want sex to be a secret. Sixty-three percent of students agreed that teenage mothers should continue schooling. The rest disagreed as 25% felt it will be a humiliation, 6% unable to concentrate. Only 28% of students agreed that teenage mothers should take care of their own baby. Eighty-four percent agreed for the Baby Hatch Programme.
Conclusion: This survey clearly concludes that awareness of teenage pregnancy is present among most students and can be prevented by various ways. Most of them did not agree with sex educations in schools to curb teenage pregnancy. Hence both parents and students should be counselled about the importance of sex education in schools and prevention of teenage pregnancy.

P1.161
Does the cause of previous caesarean section (CS) act as a predictor for successful vaginal birth after caesarean section (VBAC)? A retrospective study in Ampang Hospital, Malaysia

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Objective: To establish a relationship on the cause of previous caesarean section (CS) as a predictor to successful vaginal birth after caesarean section (VBAC) in subsequent pregnancy.
Methods: A retrospective study was conducted in Hospital Ampang from 1st January until 31st December 2010. Patients with one previous scar and keen for VBAC with no obstetrics indication for repeat lower segment caesarean section (RLSCS) were included in this study. The indication of previous CS and mode of delivery in subsequent pregnancy were identified.
Results: From a total of 6832 deliveries, 374 patients opted for VBAC. A total of nine cases were excluded from this study (two missing notes and indications for previous LSCS could not be established in seven of the cases). From 365 cases 91 had obstetrics indications for RLSCS, leaving a total of 274 (4.02%) patients to be included in this study. The indications of previous LSCS include poor progress 22.63% (62), breech presentation 17.52% (48), failed induction of labour (IOL) 8.39% (23), hypertensive disorder of pregnancy 4.01% (11), prolonged second stage 2.19% (6), secondary arrest 1.82% (5), placenta praevia 1.47% (4), failed instrument 1.09% (3), sub-fertility 0.73% (2) and abruption placenta 0.36% (1). Patient with previous indication of caesarean section due to breech presentation and placenta praevia had the highest percentage of successful VBAC (75%) followed by poor progress (45.2%). Interestingly to note that patient who had caesarean section due to hypertensive disorder in previous pregnancy had the lowest success rate for VBAC in subsequent pregnancy with 90.91% (10) end up with RLSCS.
Conclusion: Patient with one previous scar due to breech presentation and placenta praevia can be assured that the success of VBAC in their subsequent pregnancy can be as high as 75% as demonstrated in this study.

P1.162
A comparative study on the outcome of vaginal birth after caesarean (VBAC) section and repeat lower segment caesarean section (RLSCS) among patients who had one previous scar in hospital ampang in year 2010

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Objective: To compare the maternal and fetal outcomes between those who opted for VBAC and repeat caesarean section among

patients with one previous lower caesarean section in year 2010 in Hospital Ampang, Malaysia.

Methods: A retrospective study was conducted in Hospital Ampang from 1st January until 31st December 2010. From a total of 6832 deliveries, 374 (5.47%) cases of patients who had one previous scar with no history of previous spontaneous vaginal delivery were identified. With two missing notes, 372 (5.4%) cases were included in this study. The mode of delivery and outcome were then compared between patients who opted for RLSCS and had successful SVD.

Results: From 372 cases of one previous scar, 55 (14.78%) had repeat lower segment caesarean section (RLSCS) for maternal request. While 50 (13.44%) had RLSCS due to obstetrics indications. From 267 (71.77%) of patients who opted for VBAC, 116 (31.18%) had EMLSCS, 16 (4.3%) had instrumental deliveries while only 134 (36.02%) had successful SVD. Statistical analysis showed no significant difference between the outcome of SVD or EMLSCS among this group ($P = 0.1185$). Among patients who opted for RLSCS, there were eight cases of postpartum haemorrhage (PPH) while there were four cases of PPH with one needing blood transfusion in the SVD group ($P = 0.0073$). The average estimated blood loss (EBL) for RLSCS patients were 868.09 mL while the average EBL was 444.44 mL among patients who had SVD with student's *t*-test of $P < 0.0001$. In the RLSCS patients, one caesrean hystertectomy was performed due to undetected placenta accreta. One case of third degree tear, two vaginal haematoma and two examinations under anesthesia (EUA) for extended episiotomy tear were documented among patients who had SVD. There was no uterine rupture or extended uterine tear documented in both groups. There were 11 and 18 NICU admissions among patients who had RLSCS and SVD respectively ($P = 0.0001$) comparing both groups. There was no low Apgar score in both of the groups.

Conclusion: VBAC remain a safe delivery option among patient with one previous scar. Patient need to be informed that due to an increased NICU admission, delivery should be advised in centre with a proper neonatal service. Patient should be empowered on risks and benefits that are associated with each mode of delivery in order to make an informed decision.

P1.163

Extremely obese (BMI > 40 kg/m^2) and their impact on pregnancy: a 6 months retrospective review in Hospital Ampang, Malaysia

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Objective: To determine the prevalence of obese pregnant women with BMI of >40 kg/m^2 in Hospital Ampang and its associated outcomes during pregnancy.

Methods: Six months retrospective study was conducted in Hospital Ampang from 1st March until 31st August 2011. All pregnant patients with BMI of >40 kg/m^2 were included in this study. The maternal and fetal outcomes were then identified. As comparison, data for patients with normal BMI (<25) were taken.

Results: From 4896 cases, 29 (0.59%) patients with BMI of >40 kg/m^2 were selected. The highest BMI recorded was 48.89 kg/m^2 with an average weight of 102.67 kg, average height of 1.55 m and a mean age of 29.6 years. All of the patients had MGTT done and nine (31.03%) were found to have diabetes. Eight (28.66%) of patients had hypertensive disorders of pregnancy. Four had Prelabour Rupture of Membrane (PROM), two had Oligohydromnios and one patient had DVT during pregnancy. Ten (34.48%) patients had LSCS with eight (80%) of them end up with EMLSCS (two cases eclampsia, five were foetal distress and one for failed IOL). Statistical analysis showed a significance difference with $P = 0.0439$. Five (17.24%) cases of PPH were reported with one readmission due to urinary tract infection. A highly significance difference ($P = 0.0002$) were noted. No wound breakdown was reported. In terms of fetal outcome, seven (24.14%) NICU admissions were identified (one case due to prematurity at 34 weeks, two presumed sepsis- mother had leaking, two cases of hypoglycaemia and two low Apgar score due to HIE grade one and pulmonary hypertensive disease of the newborn). There was no statistically significant difference with $P = 0.4932$. It was noted that the average fetal weight among mothers of BMI > 40 kg/m^2 was 3.00 kg compared to general population of 2.88 kg. Again, no statistically significant difference was noted with $P = 0.2176$.

Conclusion: Although their numbers are small, we should be prepared to handle and managed pregnancy in morbidly obese patients. In a properly managed morbidly obese patient, a good outcome can be expected in term of maternal and fetal morbidity. However, care should be taken during labour as there are statistically significant increased in EMLSCS and PPH in this group.

P1.164

Efficacy of a Rusch intrauterine balloon in the management of postpartum haemorrhage – a practical review of a university hospital's experience

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Objective: To review the use of a Rusch intrauterine balloon intrauterine catheter in the management of primary postpartum haemorrhage (PPH) to establish efficacy and to allow the development of practical recommendations to guide future use.

Methods: A retrospective study of women with primary PPH, who underwent a Rusch intrauterine balloon catheter insertion are part of management at Kings College Hospital between Jan 2009 December 2011. The need for additional surgical or medical interventions to control bleeding, the incidence of post-operative febrile morbidity (or suspected endometritis) and analgesia requirements were reviewed. Practical issues in relation to insertion and removal were compared to try to establish a common pathway for use.

Results: Twenty cases were reviewed. The Rusch intrauterine balloon catheter insertion is highly effective in controlling blood loss and thus reducing maternal morbidity by reducing the need for additional surgical intervention or blood transfusion. Febrile morbidity rates and analgesia requirements were low. The reviewed showed a wide variation in the approach to practical usage between clinicians.
Conclusions: Rusch intrauterine balloon catheter insertion is a simple and effective method of managing women with failed medical management of PPH. A set of guidelines for practical usage are presented.

P1.165
Shoulder dystocia: are we following the rules? Audit on current practice

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Objective: To carry out an audit in order to assess our compliance with the Royal College of Obstetricians and Gynaecologists (RCOG) guidelines (Green-top.42) on shoulder dystocia.
Methods: Retrospective analysis of case-notes of all women who had experienced shoulder dystocia during the period 1st January 31st Decmber 2010. Data was analysed using Microsoft Excel.
Results: The total number of cases in this period was 48. Seventy percet of patients who had shoulder dystocia were either nulliparous or para1. The median gestational age was 41 weeks. Eight percent of patients had a history of previous pregnancies with babies weighing more than 4 kg, however, none had a past history of shoulder dystocia. Five percent of patients had gestational diabetes. Sixty-eight percent of women had spontaneous delivery of head. Seventy-five percent of women had shoulder dystocia diagnosed within the 1st min of head delivery. Ninety-eight percent had McRobert's manoeuvre. The next common manoeuvres were supra-pubic pressure and/or delivery of posterior arm. Internal manoeuvres turning to all fours and Zavanelli's manoeuvre were not used for any patient. Ninety-five percent of babies had normal APGARs at 5 min with normal pH. Average birthweight was 4094 g. The stipulated shoulder dystocia proforma was completed only in 7% of cases.
Conclusions: Although we seem to be doing very well in the recognition and management of shoulder dystocia, we may be over-diagnosing cases as demonstrated by the fact that in 45% of patients the diagnosis of shoulder dystocia was made within one minute of delivery of head. Despite the recent advances in modern obstetrics, shoulder dystocia continues to remain an unpredictable complication with significant risks to baby and mother. Shoulder dystocia has significant clinical and medico-legal implications and therefore diligence need to be exercised while diagnosing the condition, and careful documentation using standard proforma/s should be encouraged.

P1.166
Introducing balloon tamponade technology in the management of postpartum haemorrhage in Malaysia

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Objective: Worldwide, postpartum haemorrhage (PPH) is the leading cause of direct maternal mortality. In the recent Confidential Enquires into Maternal Deaths including Malaysia, Australia and the UK, PPH is consistently in the top six causes of maternal deaths. The objective is to reduce the incidence of maternal deaths from PPH by introducing balloon tamponade technology throughout Malaysia.
Methods: There are a number of approaches used when first line uterotonics have failed in the management of the atonic uterus, the commonest cause of PPH. These include: vascular ligation and embolization as well as uterine compression sutures. Recently, balloon tamponade technology (BTT) has been added to this armamentarium. However, although the concept of uterine tamponade is not new, widespread use of intrauterine balloons was not previously practiced in Malaysia. In situations when there is limited scope for delay, introducing new technology is problematic. This is particularly so in the case of an atonic uterus. Compared to the more familiar methods such as those that encourage uterine compression or occlusion of blood flow, using a balloon to expand the uterine cavity seems illogical and casts doubt on the likelihood of success. The methods employed to overcome this 'doubt' involved a series of theoretical and practical workshops that included: evidence based data on usage, practical tips and guidelines in using BTT and role-playing scenarios in the management of PPH.
Results: Over a two-year period, a series of workshops on balloon tamponade technology (BTT) in the management of PPH were provided. They included both theoretical and practical information utilizing models to convey concepts of use. These workshops were arranged during various National and Regional meetings in Malaysia.
Conclusions: This presentation outlines the various approaches and formats used in these workshops to demonstrate the feasibility of introducing BTT in the management of PPH in Malaysia.

P1.167

Uterus didelphys with right cervical hypoplasia and type-1 diabetic pregnancies alternating in both uterine cavities – an unusual case

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Introduction: Uterus didelphys represents a uterine malformation where the uterus is present as a paired organ as the embryogenetic fusion of the mullerian ducts failed to occur. As a result there is a double uterus with two separate cervices. Breech presentation, premature delivery and fetal death are more common in these patients, as are urinary tract malformations. Caesarean section is usually needed.

Case presentation: An unusual case of a type 1 diabetic patient with uterus didelphys, right cervical hypoplasia, single vagina, right renal agenesis and type 1 diabetes mellitus is presented. The right hemiuterus had only a short supravaginal cervix opening in the right lateral vaginal cul-de-sac. The patient had three consecutive viable pregnancies alternating in both uterine cavities. The first two pregnancies were delivered by caesarean section and the third one was delivered vaginally. The main complications were premature delivery and pyometra of the right uterus for the first pregnancy and precipitated premature VBAC for the third pregnancy, followed at 1 month after delivery by acute right paratubal cyst torsion. The second pregnancy was implanted into the right hemiuterus and the presentation at the time of delivery was breech, but surprisingly was the one delivered closest to term (35 weeks and 3100 g). The first and third pregnancies were delivered at 30 weeks (1850 g) and respectively 33 weeks (2300 g). In order to prevent postpartum infection and bleeding of the non-pregnant uterus we performed a curettage for eliminating the decidua after last two deliveries. The therapeutic approach and the related problems are discussed.

Conclusion: Patients with a double uterus may need special attention during pregnancy as premature birth and malpresentation are common. The non-pregnant hemiuterus develops a decidual cast which can either eliminate spontaneously after delivery with important bleeding or can complicate with pyometra. To prevent these risks a curettage should be performed after delivery. Associated type-1 diabetes is an extra challenge, since it predisposes to perinatal infections and big babies which accomodate poorly in a half-sized uterine cavity. A congenital solitary kidney associated with cervical hypoplasia on the same side could also add a problem in terms of renal function and pregnancy-induced hydronephrosis.

P1.168

Maternal and neonatal complications in post-date pregnancy: a prospective study

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Objective: Evaluate the effect of post-date pregnancy on the incidence of caesarean section (CS) and various maternal and neonatal complications.

Methods: Prospective case–controlled study conducted at Al-Basheer Hospital (Amman, Jordan) between 2003 and 2004. A total of 300 women (mean age 29 ± 12) were included. There were two study arms and one control group; Group (1) included 100 women with pregnancy of more than 42 weeks of gestation, group (2) included 100 women with pregnancy between 41 and 42 weeks of gestation. One hundred women with designated gestational age of 39–40 weeks were labeled as controls. All participants underwent first trimester ultrasonography to confirm gestational dates. Patients with medical disorders, previous uterine scars, congenital anomalies and nonreactive non-stress tracing were excluded from this study. Patients were admitted for labour induction via standard protocol utilizing prostaglandin 3 mg vaginal tablets and syntocinon augmentation consequent to artificial rupture of membranes.

Results: Differences in parity were non-significant among study groups. CS occurred in 15% in group (1) versus 10% in group (2) versus 7% in controls ($P = 0.0013$); instrumental delivery occurred in 10% in group (1) versus 7% in group (2) versus 5% in controls ($P = 0.015$); postpartum hemorrhage occurred in 15% in group (1) versus 12% in group (2) versus 9% in controls ($P = 0.0086$) and neonatal intensive care admission occurred in 10% in group (1) versus 7% in group (2) versus 4% in controls ($P = 0.0051$). One case of intrapartum death was recorded in group (1).

Conclusions: There is an exponential increase in the incidence of CS, instrumental delivery, postpartum hemorrhage and neonatal intensive care admission with advancing gestational age above 41 weeks. Furthermore, significant differences in the former endpoints exist when comparing pregnancies more than 42 weeks to pregnancies 41–42 weeks old. These results support active management of post-term pregnancies during the 41–42 weeks window as opposed to expectant management and watchful waiting.

P1.169

Takayasu's arteritis: a case study

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Background: Takayasu's arteritis (TA) is a rare form of non-specific obliterative panarteritis of unknown aetiology. It affects the aorta and its branches, leading to stenosis, thrombosis and the formation of aneurysms. It predominantly affects women in the childbearing age. Successful vaginal deliveries have been reported and lower segment caesarean sections (LSCS) were usually for fetal indications.

Case Report: A 26 year old primigravida, known TA confirmed with angiogram, presented with chronic hypertension complicating pregnancy. Her antihypertensive medications were changed to oral Methyldopa since early gestation. Her antenatal period was uncomplicated. Serial growth scans were showing normal fetal growth rate. At 32 weeks she had another admission for blood pressure stabilization. Examination revealed BP of 160/100 mmHg, pulse was normal without radiofemoral delay. Biochemical investigations were normal. BP improved with bed rest. At day 5, she had significant proteinuria but her BP remained normal. Intramuscular dexamethasone 12 mg for two doses were given in anticipation of early delivery. Her BP elevated again few days later, started on oral Nifedipine and intravenous magnesium sulfate infusion. An emergency LSCS was done for severe superimposed pre-eclampsia. The operation was uncomplicated. Her antihypertensive was changed to oral Labetolol post-operatively. She was discharged well after 5 days.
Discussion: TA is a form of granulomatous vasculitis of the aorta and its major branches. First described by Mikito Takayasu in 1908, it predominantly affects females with female:male ratio of 5:1. Same resemblance of the disease has been reported in Asia and North America. The pathophysiology is still unknown, although immune response may play an important role. The five types of the disease are based on the site of the aorta or its branches that are affected. Clinical presentation may vary depending on the types. In pregnancy, the common presentations are hypertension, congestive cardiac failure and unequal pulses. Possible complications in antenatal period are superimposed pre-eclampsia, congestive heart failure, progression of renal insufficiency and antepartum hemorrhage, which can be related to accelerated hypertension. Systolic blood pressure can rise significantly during second stage and intracerebral hemorrhage can occur. Pregnancy has not shown to increase the inflammatory activity nor worsen the haemodynamic state TA. Favourable outcome of pregnancy with low incidence of intrauterine death or miscarriage has been reported, although there is significant number of intrauterine growth restriction and premature deliveries as well. Successful vaginal deliveries have been reported and LSCS usually for fetal indication.

P1.170
Anaesthetic experiences of a WHO obstetrics safe surgery checklist for caesarean sections

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Objectives: The World Health Organization (WHO) Safe Surgical Checklists were introduced for routine use across UK hospital in February 2010. In this study we explored the attitudes and experiences of anaesthetic staff towards the maternity edition of the checklist 1 year following checklist use for caesarean sections (CS).
Methods: Two questionnaires designed for the study were offered to members of the anaesthetic team 1 year after checklist use. The first questionnaire explored respondents' general experiences with the checklist over the past year. The second questionnaire was offered immediately following each day time CS to explore the perceived impact of the checklist on each case.
Results: Fifteen anaesthetists and anaesthetic nurses responded to first questionnaire. Five (33%) enjoyed using the checklist and 11 (73%) felt it had a positive impact on maternal care. Eight (53%) thought the checklist had reduced complications. Seven (21%) thought the checklist had prevented harm. There were 31 respondents following 30 day time CS. Twenty-two (71%) thought the checklist made the mother safer. 0 (0%) thought the checklist had put the mother at risk or was a hindrance. Fifteen (48%) felt the checklist had improved awareness and 20 (65%) thought the checklist had improved teamwork and communication.
Conclusions: From the perspective of anaesthetists and anaesthetic nurses the WHO Obstetric Safe Surgery Checklist has had a positive impact on mothers delivering by CS.

P1.171
The effeectiveness of weekly versus daily iron supplementation among mild anemic pregnant women

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Objective: To study the effectiveness of weekly versus daily iron supplements among mild anemic pregnant women attending antenatal clinic at a Maternal and Child Health Clinic at Klinik Kesihatan Bandar Kota Bharu, Kelantan.
Methods: Randomised controlled trial was done over a 6 month period. Thirty-five pregnant women at 12–20 weeks of gestation with Hb level of 9–11 g/dL were enrolled in this study. Patients were randomised to two treatment group i.e. daily and weekly groups. The iron tablets were distributed by the investigator at the clinic for a month supply. Patient in the daily group received 200 mg of ferrous fumarate to be ingested daily, whereas those in weekly group also received 200 mg of ferrous fumarate but advice to ingest two tablets once a week. Haemoglobin and serum ferritin level were taken at first visit and 8 weeks later.
Results: A complete set of data was obtained for 35 women in the group supplemented daily and for 35 women in the group supplemented weekly. Majority (92.9%) of the participants were Malays and maternal age ranged from 16 to 42 years. Mean gestational age at baseline was 14 weeks. The response rate (RR) for both groups were 100%. The compliance was good in both groups and no adverse side effects were reported. At first visit, the haemoglobin and ferritin level in the daily group was 10.4 and 71.7 μg/L and for weekly group was 10.5 and 79.4 μg/L respectively. After 8 weeks of iron supplementation, the hemoglobin and ferritin level in daily group was 10.5 g/L and 74.4 μg/L and in the weekly group was 10.2 g/L and 78.6 μg/L respectively. Iron supplementation among mildly anemic women in either daily or weekly groups did not show any significant difference in the hemoglobin($P = 0.078$) and ferritin levels($P = 0.933$) after 8 weeks.

Conclusion: The supplementation of mild anemic pregnant women with 200 mg ferrous fumarate daily was as effective as weekly 400 mg ferrous fumarate in terms of haemoglobin and ferritin response under conditions resembling the routine antenatal care.
Source of funding: Incentive grants from Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia.

P1.172
The impact of postpartum haemorrhage (PPH) on maternal morbidity
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Background: PPH remains one of the most common causes of maternal mortality worldwide. Delay in diagnosis and suboptimal management are often significant contributing factors leading to maternal morbidity and mortality.
Objective: To investigate the incidence and management of PPH and to identify its risk factors.
Study Design: Retrospective observational study.
Setting: Delivery Suite, UMMC.
Methods: Between September and November 2011, women who had vaginal blood loss more than 500 mL at vaginal delivery and more than 1000 mL in caesarean delivery within 24 h of delivery were identified. Data collected included ethnicity, age, parity, BMI, medical history, haemoglobin level, ultrasonographic findings, details of previous and current delivery such as induction, duration of labour, the mode and estimated blood loss. Types of medical and/or surgical management and the timing of these interventions noted.
Results: The incidence of PPH at UMMC was 3.0% (44/1448), comprising 65.9% Malays, 20.5% Chinese, 9.1% other Asians and 4.5% Indians. More than half (52.3%) were aged 20–30 years, while nearly half (47.7%) had BMI of 26–30 kg/m^2. 27.3% had haemoglobin (Hb)level of 10.1–11 g/dL whilst 11.3% had Hb of 8–10 g/dL. There were 93.2% singletons, 4.5% twins and 2.3% triplets. 31.8% had amniotic fluid index (AFI) >18 cm whilst 9.1% had AFI ≤ 8cm. Placental praevia existed in 13.6%. A quarter had one or more previous caesarean section. 4.5% had previous history of PPH. 31.8% had undergone induction of labour. Mode of delivery included spontaneous vaginal delivery (36.4%), emergency caesarean (31.8%), elective caesarean (25%) and instrumental delivery (6.8%). Placental tissue was retained in 6.8%. 18.2% were in labour for more than 8 h. Women with estimated blood loss 500–999, 1000–2000 and >2000 mL were 36.4%, 54.5%, and 9.1% respectively. Blood transfusion was required in 31.8%. 45.5% were managed by medical means only while 54.5% also required surgical intervention. Oxytocin was the most commonly used drug (79.5%). The causes of PPH were uterine atony (43.2%), trauma (25%), tissue (11.3%), thrombin (3%) whilst 13.6% had more than one cause.
Conclusion: There was significant maternal morbidity but no mortality secondary to PPH. Generally, documentation of the management of PPH was poor. To optimise our clinical practice, we suggest increasing awareness of the guideline, running obstetric 'drills' and using a proforma for documentation.

P1.173
Effectiveness of metformin versus insulin for treating diabetes in pregnancy – a retrospective cohort study to compare maternal and perinatal outcomes
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Introduction: Metformin is increasingly being used to treat gestational diabetes mellitus (GDM) in our population either alone or in combination with insulin. The numbers of studies reporting on metformin use in GDM are still few and most are from the western world. This study was undertaken to compare the use of metformin with insulin for treating GDM in an urban Pakistani population.
Methods: A retrospective cohort study was performed among women with singleton pregnancies diagnosed as GDM who were booked at the AKUH from January 2009 to June 2010. Maternal and neonatal outcomes and complications were assessed for women being treated with metformin and those being treated with insulin.
Results: In our study of 110 patients, 53 had received metformin and 56 patients received insulin as the first line drug of treatment for GDM. The mean birthweight was similar in both the groups; that is, 2.9 kg in the metformin group and 2.88 kg in the insulin group. Frequency of SGA was comparable; 5.7% in the metformin group and 9.3% in the insulin group (P-value = 0.71). A higher percentage of women in the insulin group developed gestational hypertension, 22.2% vs. 13.7%, though, it did not reach statistical significance (P-value = 0.31). One neonate in the metformin group developed respiratory distress syndrome versus none in the insulin group. 7.8% of neonate in the metformin group and 3.6% in the insulin group were shifted to NICU (P-value = 0.42).
Conclusion: Metformin is as effective as insulin in treatment of diabetes in pregnancy.

P1.174
Fetomaternal outcomes in women with cardiac disease in pregnancy
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Introduction: Cardiac disease complicates 0.2–3% of pregnancies and is responsible for 10–25% of all maternal deaths. The objective of the study was to assess the fetomaternal outcomes in pregnant women with congenital and acquired cardiac disease.
Method: This retrospective study was carried out at Aga Khan University hospital from January 1999 to 2006.
Results: Our study population comprised a total of 138 pregnant cardiac patients. Majority of them had acquired cardiac disease (77.5%) (n = 107) while 22.5% (n = 37) of patients had congenital cardiac defect. A higher frequency of women were diagnosed with cardiac disease prior to pregnancy in the

congenital than the acquired group, 96.8% vs. 90.6%. Similarly a greater percentage of women in the congenital group had cardiac lesion corrected prior to pregnancy than the acquired group, 41.9% vs. 32.7%. Our study showed similarity in the proportion of women undergoing caesarean section in both the groups, 32.3% vs. 30.7%. However a greater percentage of women in the congenital group underwent instrumental delivery compared to the acquired group (32.3% vs. 12.9%). Frequency of preterm birth was slightly higher in the acquired group (8.4% vs. 6.5%). A greater proportion of women in the congenital group required admission to cardiac intensive care (9.7% vs. 4.7%). Women with a congenital defect had a higher frequency of growth restricted fetuses compared to the acquired group (25.8% vs. 18%).
Conclusion: Higher proportion of fetomaternal complications were seen in women with congenial cardiac diseases compared to the acquired heart defect group.

P1.175
Normogram of fetal nasal bone length in second trimester in the Pakistani population

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Introduction: Down syndrome is the most common chromosomal abnormality in newborns. Invasive testing is the only confirmatory procedure for its prenatal diagnosis. However invasive procedures have a miscarriage rate of 1%. Hence the need for a screening test that has a high sensitivity for detection of Trisomy 21. Evidence is emerging for relationship between ultrasonographic absence or hypoplasia of nasal bone and trisomy 21, indicating that nasal bone length may be useful in screening for trisomy 21 in the first and second trimester. Morphometery of facial features including nasal bone length differs with ethnicity. Therefore prior to adopting nasal bone as a screening marker for trisomy 21, its normal range needs to be identified in different races. Reference ranges for fetal nasal bone has been established in Caucasians, African-American and South American populations. Data on reference ranges for fetal nasal bone in Asian population is limited. Midtrimester fetal nasal bone length has been assessed in Chinese population and found to be shorter than their Western and African counterparts. Since no data has been published from South East Asia, we intend to construct a reference range for nasal bone length in healthy Pakistani fetuses.
Objective: The study aimed to construct normograms for fetal nasal bone length in Pakistani fetuses.
Methods: A cross-sectional study was conducted from January 2004 to December 2011. Prospective as well as retrospective data was included.
Sample Selection: Study population: The study population was all fetuses having anomaly scan in fetomaternal unit. Measurement of the fetal nasal bone was performed between 14 and 28 weeks. Scatter plots for nasal bone length as a function of gestational age and biparietal diameter were constructed. The 5th and 50th and 95 th percentile values were calculated for each gestational week period of 14–19, 20–24 and 25–28 weeks
Results: The nasal bone length measurement showed a significant increase with gestational age (GA) ($P < 0.05$). A linear relationship between nasal bone length and gestational age (NBL = $-4.27 \times$ GA + 0.639, $R^2 = 0.258$, $P < 0.001$).
Conclusion: The measurement of nasal bone length is feasible in thesecond trimester. The reference rangeof NBL in Pakistani fetuses in the second-trimester of pregnancy was established. This forms a basisfor further study on the use of fetal nasal bone measurement in the screening for aneuploidy in thePakistanipopulation.

P1.176
Assessment of language needs in maternity care

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Objective: In many western countries, a significant portion of women do not speak or understand the primary language of the country. There is published evidence linking the language needs of patients to their morbidity. In the UK the impact of language barriers on maternal morbidity was noted by the Centre for Maternal and Child Enquiries (CMACE) and one of it's top 10 recommendations in the 'Saving Mothers' Lives' report was that professional interpretation services should be made available to all patients who do not speak English. This prospective audit aimed to look at the need and utilisation of interpretation services in a leading tertiary maternity centre in the UK.
Methods: Over a 2 month period, all clinical staff including obstetricians, midwives and anaesthetists were requested to complete a proforma for every clinical encounter with a patient who defined their first language as not English. This was carried out across all areas in the maternity hospital, including clinics and acute settings. The proforma required the clinician to identify whether there was a need for a professional interpreter and record if a professional interpreter or other aids such as online resources and leaflets were provided.
Results: There were 60 cases identified in total. Twenty-six patients were identified as needing an interpreter. Of these 26 patients, only nine used an interpreter. Five patients had declined an interpreter while for another five interpreter services were sought but was not available. Two had used written leaflets whilst one had to use online interpretation services. Four patients did not have any form of interpretation used. Ten patients had relied on family members as interpreters.
Conclusion: The results highlight the variations in language needs being met for patients who do not speak or understand sufficient English. The heavy reliance on family members being used as interpreters raises ethical and legal issues surrounding issues such as confidentiality, validity of their consent and whether patients are prevented from exercising their autonomy. As family members are unlikely to be familiar with medical terminology, key diagnostic information may be getting lost in translation, potentially adversely affecting the healthcare provided. The lack of

availability of interpreter is also an area for concern. An education programme targeting all staff members to highlight the need for using professional interpreters as well as a departmental analysis of the availability of interpretation services is needed to improve the care delivered to this vulnerable cohort.

P1.177
Down syndrome in both dichorionic twins: a case report

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Objective: To report a rare case of dichorionic twins both affected by Down syndrome, diagnosed after birth. Down syndrome is the most common chromosomal abnormality. It occurs in 1: 600 800 of all births. In dichorionic twins, the risk of aneuploidy is that of each of the individual fetuses and its occurrence in both dichorionic twins is very rare.
Method: This case report was done by reviewing patient's case notes, literature search and obtaining verbal consent from the patient.
Case: Twenty-seven year old nulliparous with dichorionic twins pregnancy. History of essential hypertension, on labetalol 200 mg b.d. No other medical condition and no family history of congenital or genetic abnormalities. She booked at 13 weeks + 4 days, when chorionicity was determined as dichorionic. Nuchal transluscency scan was not done. Both fetuses had shown concordant growth on antenatal scans and structural anomaly scan at 20 weeks gestation was normal for twin 1 while that of twin 2 was said to be inconclusive after two attempts. She presented with reduced fetal movements at 35 weeks + 3 days and scan then showed decreased end diastolic flow on the umbilical artery Doppler of Twin 2. A category 2 caesarean section was performed at 36 weeks + 4 days of gestation and twin 1 and twin 2 weighed 2.1 and 2.2 kg respectively with Apgars of 9 at 5 min. Twin 1 was observed to have reduced oxygen saturations while slightly reduced tone was noted in both of them. Also, further neonatal examinations revealed flat palpebral fissures, low-set ears and sandel gap in both twins. Echocardiogram was concordant for cardiac abnormality. Both twins subsequently had Karyotype and Rapid FISH test that confirmed Trisomy 21 (47XY).
Conclusion: This case highlights a rare situation where a 27 year old patient delivered both dichorionic twins with Down syndrome. This will have significant and long-lasting psychological impact on the mother and entire family as it results in a range of problems for both children; primarily intellectual impairment (80% severe vs. 20% mild or none), increased mortality and morbidity due to congenital malformations e.g. cardiac defects, increased risk of leukamia, thyroid disorder, epilepsy and Alzheimer's disease.

P1.178
Web based decision support tools for maternity: reducing risks by designing errors out of clinical decision processes

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Background: Human error in health care is inevitable.[1] To mitigate this, 'we must re-examine all that we do and redesign our many and complex systems to make them less vulnerable to human error'.[2]
Objective: To develop a set of electronic decision support tools for selected well known error prone areas of common maternity encounters. The tools would reduce the chances of error by automating and simplifying key information processing tasks, using readily available computer resources.
Methods: Key recommendations from two RCOG and NICE clinical guidelines (Chicken Pox, and Electronic Fetal Monitoring) were extracted and exported onto Microsoft Excel (MS Excel). MS Excel based intuitive interactive tools were then developed, transformed into web (html) files, and placed on a local computer. A 15 person panel of obstetric registrars and midwives evaluated the tool, using a five-item response scale measuring their levels of agreement with statements on; accessibility, user friendliness simplicity and reduction of complexity, speed, potential to reduce error, and whether they were likely to use such tools again in future.
Results: There was unanimous support for the tools, with all areas assessed scoring positively.
Conclusion: Electronic decision aids, based on evidence based guidelines, can be developed to support full paper based and electronic clinical guidelines. These user friendly interactive tools are deliberately designed to improve access to key recommendations and to and reduce complexity that often accompanies the use of clinical guidelines, while utilising already available computer resources.
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2. Leape LL, Berwick DM. Safe health care: are we up to it? BMJ 2000;320(7237):725–6.

P1.179
Management of a pregnant woman with Anti-India b antibodies

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Introduction: The India blood antigens were first described in the 1970s. India-b antigen negative individuals represent approximately 0.02% of all Indians,[1] the allele is even less common in non-Indian populations. India-b negative individuals

who develop corresponding antibodies are at risk of severe transfusion reactions. In the UK very few blood donors are India-b negative, with any donations being held in the frozen blood bank in Bristol. This can be problematic in the event of acute blood loss requiring urgent blood transfusion.
Case History: SP was found to be positive for Anti-India-b antibodies at booking visit. The importance of iron therapy was stressed, as there was very little, if any, blood compatible should she require it. Before a management strategy could be implemented she moved house and planned to deliver at another hospital. The importance of continuing with iron therapy and the need to see a consultant in the new location was reiterated. SP returned at 35 weeks of gestation. She described non-compliance with the iron therapy due to intolerance, her haemoglobin was 10.7 g/L. Multidisciplinary involvement was initiated including the NHS blood transfusion centre. Unfortunately there was no compatible blood available within UK to cover for her confinement period. Possible management options were discussed and SP opted for autologous blood donation. She was then 37 weeks of gestation. She received low molecular weight iron dextran to counteract the fall in haemoglobin prior to donation. SP donated two units of red cells at 38 and 39 weeks of gestation with no complications (pre-donation haemoglobin levels were 11.2 and 10.9 g/dL respectively). She had a normal vaginal birth at 39 weeks of gestation, with minimal blood loss. Haemoglobin at delivery was 11.2 g/dL.
Conclusion: This case highlights the efficacy of iron dextran infusion in late pregnancy and the validity of autologous blood transfusion in pregnant women in whom haemorrhage is anticipated. Although anti-India-b antibodies are rare, obstetricians are likely to encounter similar cases in the future due to an increasing immigrant population from the Indian subcontinent. The experience of antenatal autologous blood donation described is widely applicable to other areas of obstetric practice, such as other rare blood antibodies, members of certain religious faiths and placenta praevia - the approach to management detailed in this case is therefore very valuable to clinical practice.
Reference: 1. Badakere SS et al. Evidence for a new blood group antigen in the Indian population. Indian Journal of Medical Research 1973; 61(4) 563.

P1.180
Revisiting instrumental vaginal delivery rates in obese pregnant women

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Introduction: Obesity is the greatest threat to the childbearing population of UK. According to the 2003–05 CEMACH report, half of those who died were obese, 15% extremely obese.
Methods: We performed a prospective study in our unit for a period of 4 months (February–May 2009), total deliveries during this period were 1560. The details were collected from 1235 (79.2% of the cases). To evaluate the prevalence of morbid obesity (BMI 35 or more) in our pregnant women and their obstetric outcome, we looked into the booking BMI and collected their demographic details. We compared the outcomes in the group with BMI <35 with the second group comprising of women with BMI 35 or more.
Results: The prevalence of obesity in our population was 212/1235 (18%), and 8% (n = 88) had BMI of 35 or more. The median BMI was 38. Pre-eclampsia was significantly higher in the obese pregnant women (0.5% vs. 10.2%, P = 0.049). Increased incidence of augmentation with Oxytocin, postpartum haemorrhage and neonatal intensive care admission rates were noticed in the group with BMI > 35. Caesarean section (CS) rates were higher in the obese group (emergency CS rates of 10.6% vs. 19.3%, P = 0.02 and elective CS rates 14% vs. 21.6%, P = 0.06). Interestingly the instrumental vaginal delivery rates were lower in the obese group (3.4% vs. 11.4%, P = 0.01). The rates of third degree tears and shoulder dystocia were not significantly different.
Discussion: This study showed that the women with greater BMI (>35), had an increased CS rates, but lower instrumental delivery rates in contrast.

P1.181
Effective strategy to improve bladder care in women with operative vaginal delivery – our experience

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Introduction: A small percentage of women may develop long term bladder dysfunction following vaginal birth. This can cause both embarrassment and distress . A single episode of bladder over-distension can lead to irreversible damage to the detrusor muscle and injury to the parasympathetic nerve fibres within the bladder wall. For some women this can result in urinating difficulties. The impact on the families and the carers of women with bladder problems may be profound
Objective: Aim of the audit was to improve bladder care for all women who had operative vaginal deliveries and to ensure that we are adherent to standards of good clinical practice following operative vaginal delivery – in terms of bladder care.
Methods: It was a retrospective study. Data was collected for a period of 6 months from January 2011 to July 2011. We analysed 80 medical records of women who had operative vaginal deliveries.
Results: Our study showed an overall 80.4% compliance rate of documentation with good clinical practice according to Royal College of Obstetricians and Gynaecologists (RCOG) guidelines, however only 13.7% compliance rate with bladder care. This was because bladder care guidelines were still being embedded into practice. There has been a big drive to remind all midwives and doctors of the importance of the measuring and documenting of the first void following delivery
Conclusion: Bladder management is an important and often neglected part of maternity care and all health care professionals must be vigilant in order to anticipate and prevent unrecognised urinary retention and to identify other urinary problems at an early stage. Potential areas of deficiency in care should be identified and rectified immediately through team based reflection and pro active risk management.

P1.182

Observational study of heart disease in pregnancy – validity of the CARPREG risk score in the local population in Hospital Sultanah Aminah, Johor Bahru

Noor, EMD[1]; Ravichandran, N[2]; Quek, YS[1]; Woon, SY[1]; Ravichandran, J[1]

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Objective: To asses the validity of a risk score index (CARPREG) in predicting maternal and perinatal outcome in pregnant patients with heart diseases.
Methods: Prospective observational study in pregnant women diagnosed with heart disease for 1 year duration involving 150 patients managed by combine obstetrician and cardiologist. Patients went through CARPREG risk scoring and their cardiac events were observed. CARPREG score is the scoring system that can be used to estimate the probability of a cardiac complication in the mother. The CARPREG score system includes NYHA functional class II or cyanosis, left ventricular systolic dysfunction (EF < 40%), left heart obstruction and prior cardiac event. The rate of cardiac complications for a patient with a score of 0, 1 and >1 was 5%, 27% and 75% respectively.
Results: One hundred and thirteen patients were scored as 0, 24 and 13 patients were scored as 1 and 2 respectively. Among the 89 patients with acquired heart disease, majority was scored as 0(67.4%). Cardiac event for CARPREG 0 was 1.7%, 15% and 11.1% for CARPREG 1 and 2 respectively. All these cardiac event was heart failure, however there was one maternal death and this occurred postpartum in the CARPREG 1 group (severe aortic stenosis). In the congenital heart disease group, there was 61 patients and 53 (86.8%) were scored as 0, and 4 scored as 1, and the remaining 4 for scored as 2. None of the patients scored as 0 or 1 had a cardiac event. Three patients (75%) in CARPREG 2 had a cardiac event and two of them that occurred antepartum was heart failure and one maternal death which occurred postpartum (Eisenmenger syndrome). Overall, among all the 150 patients (congenital and acquired), in the CARPREG score 0 group; only 0.9% of patients had a cardiac event which was an antepartum event. As for patients in the CARPREG 1 group, 12.5% had a cardiac event and 30.8% out of the CARPREG 2 group.
Conclusion: The cardiac events observed in our study was relatively lower compared to the standard outcome in the CARPREG scoring system, thus a different method or scoring system is required in our local setting. However in CARPREG 2, patients with congenital heart failure had a higher risk of developing cardiac event. More research and bigger studies need to be done to assess the validity of this scoring system.

P1.183

Observational study of history of peripartum cardiomyopathy and their outcome in Hospital Sultanah Aminah, Johor Bahru

Noor, EMD[1]; Ravichandran, N[2]; Quek, YS[1]; Woon, SY[1]; Ravichandran, J[1]

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Objective: To observe the demographic data in women with a previous history of peripartum cardiomyopathy, their pregnancy and perinatal outcome.
Method: A prospective observational study involving seven women who were previously diagnosed with peripartum cardiomyopathy. Their current cardiac status was compared via an ECHO, the demographic data was reviewed and the durataion of pregnancy and mode of delivery was measured. As for perinatal outcome, the Apgar score at 5 min, birthweight upon delivery and gender was observed.
Results: Patients had a mean age of 31.1 years and a mean BMI of 25.7 which was normal. All the patients that we followed up was of Malay ethnicity and all were of parity 4 or less. None of the patients had gestational diabetes in the current pregnancy and only one patient had gestational hypertension. One out of seven patients was diagnosed with anemia in the current pregnancy. An ECHO done in this current pregnancy showed a mean EF of 59%. Five of the patients (71.4%) went through vaginal delivery, one patient went for caeserean section and one patient had instrumental delivery. The mean birthweight was 3.2 kg. The mean gestational age of delivery was 38.8 weeks.
Conclusion: All the patients with a history of peripartum cardiomyopathy before had normal ECHO findings in their current pregnancy and it is relatively safe to have another pregnancy without any significant maternal and perinatal morbidity and mortality provided thay are looked after a dedicated obstetric and cardiology team.

P1.184

Observational study of peripartum cardiomyopathy and pregnancy outcome – a single centre experience in Hospital Sultanah Aminah, Johor Bahru

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Objective: To observe the demographic data in women with peripartum cardiomyopathy, their pregnancy outcome and perinatal outcome.
Method: A prospective observational study involving 16 women who were diagnosed with peripartum cardiomyopathy. The demographic data was reviewed and the duration of pregnancy and mode of delivery was measured. As for perinatal outcome, the

Apgar score at 5 min, birthweight upon delivery and gender was measured.

Results: The mean age of the women in this group was 29.6 years and they had a mean BMI of 29.6 kg/m^2. There were nine Malays, five chinese and two indians. Ten of the patients were of parity four or less. Seven out of 16 (43.8%) of these patients were diagnosed with gestational diabetes mellitus and 14 out of 16 (87.5%) were diagnosed with gestational hypertension. Approximately half of these patients had anemia in pregnancy. The mean ejection fraction for them was 33% and five of them were diagnosed antepartum and 11 diagnosed postpartum. For the patients who were diagnosed postpartum, the mean interval between delivery and diagnosis was 6.5 days. Mean gestational age was 37.3 weeks and 4 (25%) of patients had vaginal delivery and the rest delivered abdominally with a mean birthweight of 3 kg. Ten of the patients delivered a male baby and six delivered a female baby.

Conclusion: Patients with cardiomyopathy had an association with gestational hypertension. With good combined cardiology and obstetric care, most of the patients could reach term and attain normal birthweight. There was no association of gender with cardiomyopathy.

P1.185
Severe idiopathic thrombocytopenic purpura in pregnancy: a rare case of IgG anti-platelet antibody placental transfer resulting in neonatal jaundice

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Objective: To report a case of refractory idiopathic thrombocytopenic purpura (ITP) in a pregnant patient with known chronic ITP in her second pregnancy who underwent an elective caesarean section at 36 weeks of gestation. She delivered a baby with severe neonatal thrombocytopenia requiring intravenous immunoglobulin and platelet transfusions due to antiplatelet antibody placental transfer.

Methods: This rare case was identified at a tertiary General Hospital in England. The case note was retrieved retrospectively from the medical records library and studied in detail. Literature was reviewed.

Results: We report a case of a 22 year old, gravida 2 para1, who presented at 10 weeks of gestation to the haematology clinic with an intrauterine pregnancy on scan and normal booking bloods except a low platelet count of 42 $\times$ 10^9/L. Her obstetric history revealed gestational diabetes and ITP confirmed on bone marrow biopsy. She obtained a partial platelet response with intravenous immunoglobulin infusions. She was induced at 36 weeks of gestation and had a normal vaginal delivery. She had blood transfusion due to postpartum haemorrhage. The baby developed ITP secondary to antibody transfer through the placenta. In this pregnancy she attended the joint obstetric-haematology clinic. Fetal cordocentesis was not performed. At 35 weeks of gestation she had a platelet count of 19 $\times$ 10^9. A multidisciplinary team meeting was held and the mode and timing of delivery was discussed to optimise the outcomes for the patient and baby. She received intravenous immunoglobulin prior to the delivery. At 36 weeks of gestation, she underwent an elective caesarean section, delivered a male baby weighing 2415 g (25th percentile) with an apgar of 8 and 9 at 1 and 5 min respectively. The neonate had a platelet count of 27 $\times$10^9/L, few petechiae on chest, mild respiratory distress, jaundiced and was slightly floppy. The neonate received intravenous immunoglobulin and platelet transfusion for neonatal thrombocytopenia, phototherapy for jaundice and intravenous antibiotics for chest infection in the neonatal unit. Neonatal alloimmune thrombocytopenia was ruled out. Immunophenotypic analysis of platelets was done and platelet antigens were negative. This case was purely due to placental transfer of antibody which does not occur frequently in two subsequent pregnancies, although in this patient it occurred in both pregnancies.

Conclusions: Refractory ITP and anti-platelet antibody placental transfer in the same patient in two subsequent pregnancies is rare. A multidisciplinary approach should be warranted in all cases of pregnant patients with ITP as it has implications on subsequent pregnancies and future treatment.

P1.186
Caesarean delivery on maternal request

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Introduction: In the last few decades delivery by caesarean section (CS) has become increasingly safe. That is the reason for safer indications for delivery by CS. Nowadays the CDMR situation makes the mother's preference the determining factor for the delivery mode.[1] CDMR is defined as primary caesarean section for the singleton term pregnancy performed at the maternal request in order to avoid a vaginal birth without any recognized medical or obstetrical indication for the procedure. A culture of choice has been promoted in recent years, but contrary to the anticipated demand for less obstetrical intervention there has been increase in demand for delivery by CS rather than the reverse. Rather than counselling women requesting caesarean section about the risks, a better approach would be to explore the reasons for the request Women who want more than one child should be informed of the benefits of vaginal delivery and the complications associated with repeated caesarean section.

Objective: To find out the total number of women requesting for CS without any medical or obstetrical indication at term with singleton cephalic pregnancy.

Methods: Observational study at armed forces hospital king abdul aziz naval base al jubail ksa between August 2011 and May 2012. Sample size comprised ofall pregnant women coming for antenatal checkups and delivery in the hospital either booked or unbooked will be included in the study. The total number of women requesting for CS without any medical or obstetrical indication at term with singleton cephalic pregnancy will be calculated. Data will be collected from hospital record. Inclusion criteria: (i) mothers who comes or came to the hospital with decision already made (ii) mothers who make their mind during antenatal visits (iii) mothers who make up their minds after admission. Exclusion

criteria: (i) mothers with multiple gestations (ii) mothers who changed their mind after counseling and discussion (iii) mothers having another indication for CS along with request (iv) mothers who requested for CS during labour and then delivered vaginally
Results: Will be calculated and analysed by relative tests. Test of significance will be applied if require. Spss latest version will be used to analyse the results.
Conclusion: It will be according to the number of mothers requesting for caesarean delivery and then data analysis.
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P1.187
Peripartum hysterectomy: a decade review in Putrajaya Hospital

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Objective: To determine the incidence, socio demographics, indications, risk factors, complications and management of peripartum hysterectomy in Putrajaya Hospital, over the last decade.
Methods: A retrospective analysis was conducted of all cases of peripartum hysterectomy performed at the Putrajaya Hospital between years 2002 and 2011 inclusive. Peripartum hysterectomy was defined as one performed after or at time of delivery but within the first 6 weeks postpartum. Cases were ascertained via hospital obstetric database.
Results: There were 16 peripartum hysterectomy cases among 51 569 births, a rate of 0.03%. The women who underwent peripartum hysterectomy in majority came from the Malay ethnic group (68.8%), with the mean age of 32 years old, and 12.5% are primipara. Fifty-six point three percent (56.3%, $n = 9$) of the peripartum hysterectomy followed an emergency caesarean section, while 31.3% ($n = 5$) followed vaginal deliveries. Indications for peripartum hysterectomy were uterine atony ($n = 9$, 56.3%), abnormal placentation, inclusive of morbidly adherence placentation ($n = 6$, 37.5%), and uterine rupture ($n = 1$, 6.3%). The cause of uterine rupture is due to motor-vehicle accident. A significant association between previous caesarean section and abnormal placentation was confirmed ($P = 0.05$). Maternal morbidity was significant, with postpartum hemorrhage and disseminated intravascular coagulation occurring in all the women, intra-operative bladder injury due to morbidly adherent placenta to the bladder ($n = 2$, 12.5%), psychiatric ($n = 2$, 12.5%) and/or neurologic disorders ($n = 1$, 6.3%) and vesicovaginal fistula ($n = 1$, 6.3%) were among the complications. All women required massive blood transfusion and DIVC regime and an admission to the intensive care unit. There was one maternal mortality in relation to peripartum hysterectomy due to uterine atony.
Conclusions: Uterine atony is the main indications of peripartum hysterectomy, followed by adherence placentation. Multiparity, previous caesarean section and abnormal placentation were identified as risk factors. The maternal morbidity still remained high; however the incidence in our center is low due to early identification and anticipation contributing to effective management of postpartum hemorrhage.

P1.188
A study of mother to child transmission (MTCT) rate and immediate fetal outcome among retroviral infected mothers

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Objective: Mother to child transmission (MTCT), which occurs primarily during the intrapartum phase, accounts for 90% of paediatric HIV infection. Our goal in this study was to determine among retroviral infected mothers; the prevalence of HIV infection and the MTCT rate, the demographic distribution, the coverage of antiretroviral therapy and its efficacy in reducing MTCT and to note any association with the mode of delivery and MTCT rates. We also studied the immediate fetal outcome such as apgar score, gestational age at delivery and birthweight of infants delivered by these mothers.
Methods: A population based cross sectional retrospective review of 36 retroviral infected mothers who had presented to Hospital Seberang Jaya, Penang over 8 years from January 2000 to December 2007 were studied. Clinical data were extracted from the patients' clinical records, and statistical analyses were performed using the SPSS 19.0.
Results: The prevalence of HIV infection among pregnant mothers throughout the study period ranged from 0.02% to 0.1%. The MTCT rate was 13.8%. Mothers were predominantly aged between 20 and 30 years (82.4%). Most mothers were infected by their husbands via heterosexual contact at 62.5%. Majority of husbands were lorry drivers (43.1%). 63.3% of couples who were both retroviral positive had significantly higher MTCT rate, $P = 0.038$ ($P < 0.05$). Ninety percent received the long course zidovudine antiretroviral therapy with a significant 79% reduction in MTCT rate; $P = 0.034$ ($P < 0.05$) compared to no antiretroviral therapy. Treatment was commenced before 28 weeks in 58.3% of mothers and this was statistically significant in reducing MTCT rate, $P = 0.01$ (<0.05). Mothers who delivered via caesarean section had lower MTCT rate (16.7% vs. 27.3%). The exposure to the long course zidovudine antiretroviral therapy was not associated with any fetal anomalies. All mothers had delivered at term with a mean gestational age of 37 weeks. The mean apgar score which was favourable was 8 at 1 min of life and nine at 5 min of life. The mean birthweight was 3.09 kg. CD4 counts and viral load were not monitored at our centre during this study period.
Conclusion: All retroviral infected pregnant mothers should receive the antiretroviral therapy and commence it before 28 weeks. Elective caesarean section should remain the mode of delivery for these women.

P1.189

Perimortem caesarean section (PMCS); validating the technique

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Introduction: Cardiopulmonary arrest during pregnancy presents a unique clinical scenario involving two patients: the mother and the fetus. Management of these patients demands a rapid multidisciplinary approach. Basic and advanced cardiac life support algorithms should be implemented; however, the physiological and anatomical changes of pregnancy may require a perimotem caesarean (PMCS) delivery. Randomised trials of approaches to management of pregnant women with cardiopulmonary arrest are lacking.

Objectives: Validate the technique of this rare Obstetrics procedure based on case series. We describe two cases of cardiac arrest in pregnancy in which a PMCS was performed as part of the resuscitation process.

Case 1: A 36 year old uncomplicated mulipara was in active labour. Subsequently; experienced a cardiopulmonary arrest secondary to amniotic fluid embolism (AFE). Code blue was called and cardiopulmonary resuscitation (CPR) commenced. To facilitate on going CPR perimotem caesarean section was performed in the birthing suit an aid of a scalpel blade.

Case 2: A 24 year old uncomplicated primi in labour with fully dilated had a cardiac arrest in the birthing suite. CPR was commenced and with in 4 min of unsuccessful resuscitation a PMCS was performed.

Findings: In both occasions to facilitate the ongoing resuscitation Obstetrics team performed a PMCS approximately between 45 min since commencement of CPR. Scalpel blade with out the handle was the only surgical instrument that was used. Skin to delivery time was between 15 and 30 s. Technique transverse skin incision performed with the scalpel blade and blunt dissection of the subcutaneous tissue. The fascial incision extended bluntly by inserting the fingers of each hand under the fascia and then pulling in a cephalad-caudad direction. Rectus muscle layer and the peritoneum separated bluntly by the operator's fingers. Lower transverse incision made on the uterus with out reflecting the bladder. Once the fetus delivered in both occasions atonic uterus noted. uterine closure performed in two-layer, continuous closure with delayed absorbable synthetic suture (DASS). Skin approximated with interrupted stitches using DASS. Intervention such as PMCS is of extreme importance for both maternal and fetal outcome. Time-consuming activities such as fetal monitoring and transportation to the operating theatre reduce the chances of maternal and neonatal survival and should be avoided.

Conclusion: These two cases illustrate the importance of a PMCS; which is potentially a lifesaving procedure for both mother and baby and could be promptly performed effectively even in a suboptimum location with minimum surgical instruments.

P1.190

The association of gestational weight gain with sociodemographic background and the pregnancy outcomes in women who came for delivery in a district hospital

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Objective: To describe the association of total gestational weight gain with sociodemographic background and to evaluate whether total gestational weight gain has a role in predicting the pregnancy outcomes amongst the obstetrics population in Seberang Jaya Hospital.

Methods: A cross-sectional cohort study. A total of 674 pregnant women with singleton pregnancy who came to deliver vaginally in Seberang Jaya Hospital from the period of 17th February 2010 until 17th May 2010 and were booked at their respective health clinic at ≤12 weeks period of amenorrhoea were successfully recruited. Their maternal (antepartum, intrapartum and postpartum event) and neonatal outcomes were documented and evaluated.

Results: The mean of total gestational weight gain in the recruited sample was 10.3 ± 4.95 kg. Gestational weight gain is observed to be higher in the younger age group and in women who came to deliver at more advanced period of gestation. Less weight gain is observed in women with higher gravidity, parity and higher pre-pregnancy body mass index. Gestational weight gain does not show any association with race, history of previous LSCS and miscarriage. Patients with higher gestational weight gain had a longer duration of labour, higher degree of perineal tear and higher neonatal birthweight. Weight gain also shows association with different group of gestational diabetes mellitus, analgesia usage in labour, postpartum haemorrhage, Apgar score at 1 min, shoulder dystocia and wound complications. On the other hand, it does not shows any role in predicting hypertension in pregnancy, the mode of delivery, the need for induction of labour, duration of emergency caesarean section, Apgar score at 5 min, postpartum infection and duration of hospital stay.

Conclusion: Women of younger age and lower parity were associated with more gestational weight gain compared to older and higher parity women. Although there is no optimum or normal amount of weight to be gained during pregnancy, this study showed significant correlations between total pregnancy weight gain to maternal and fetal complications. The results of this study emphasized the importance of educating women to know their pre-pregnancy weight and not to put on excessive weight during their pregnancy.

P1.191

Massive pulmonary embolism in a pregnancy: could we have saved both lives?

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Case History: A 19 year old non-diabetic primigravida, presented in January 2012 with a right thigh carbuncle and bilateral leg swelling. Three procedures for wound debridement under spinal anesthesia were performed within a 5 day period as the wound failed to heal. An ultrasound doppler of lower limbs revealed bilateral lower limbs deep vein thrombosis at the level of common femoral vein. Therapeutic dose of low molecular weight heparin was commenced but she subsequently developed massive acute pulmonary embolism with saddle embolus on computed tomography pulmonary artery (CTPA). She became septic with a platelet count of 34 000, needing cardiovascular support and assisted ventilation in the intensive care. A multidisciplinary decision was made to insert an inferior vena cava (IVC) filter and remove the embolus under cardiac bypass surgery. Due to extremely low platelet, it was considered hazardous to have a caesarean section preceding the surgery. Unfortunately, intrauterine fetal death was diagnosed immediately following insertion of IVC filter. The saddle embolus was removed successfully. The fresh stillbirth delivered spontaneously 9 h post-surgery without any bleeding complications. After a hypertensive event 2 days later, she developed seizures and was treated as an eclamptic. A CT and MRI brain with contrast revealed posterior reversible encephalopathy syndrome (PRES). She was discharged home at 6 weeks without any neurological sequalae and advised to continue on lifelong anticoagulation. She has since undergone reconstructive plastic surgery for her thigh lesion.
Discussion: This case proved to be a management dilemma. This was a life threatening situation where a young primigravida presented with severe sepsis and thrombocytopaenia, bilateral pulmonary embolism while being fully anticoagulated. Saving the mother's life was hence our priority as her life would be put in jeopardy with a caesarean section in the presence of multiple risks which may have weighed down the bypass procedure and threatened her life. However, few questions arose as to whether we could have saved the baby's life as well. Delivery of the fetus could have improve maternal circulation, optimising ventilation and allowing the fetus a chance of survival. Inserting the IVC filter could have potentially further decreased the venous return and reduced the right ventricular output, causing the demise of the baby.

P1.192

Hepatorenal impairment in pregnancy – investigation and management

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Background: Acute fatty liver of pregnancy (AFLP) is a rare clinical entity with an incidence of one in 7000 to one in 16 000, but a high mortality rate (30%) where diagnosis is delayed. We present a case report of AFLP and its management.
Case Report: Twenty-four year-old parous woman with a normal BMI presented to us at 38 weeks of gestation feeling unwell with a headache, malaise, epigastric pain, backache and generalised body pain. Her past medical and obstetric history was unremarkable. Clinical examination revealed jaundiced sclera, borderline increased blood pressure (140–150/100 mm Hg), and absence of proterinuria. Initial bloods showed hepato-renal impairment with raised urea, creatinine, ALT, urates and conjugated bilirubin. Clotting was impaired with low platelets, prolonged prothrombin time and low fibrinogen levels. Though pre-eclampsia was the preliminary diagnosis, absence of proterinuria and overt jaundice prompted further investigations. Blood sugars showing persistent hypoglycaemia (<3 g%) clinched the diagnosis of AFLP. Ten percent Dextrose infusion was commenced immediately to correct the blood sugars. Vaginally, the cervix was quite favourable and artificial rupture of membranes was done to expedite delivery. An emergency lower segment caesarean section (LSCS) was done shortly thereafter when the CTG became suspicious in early labour and abruption noted. Baby was born in a good condition and LSCS was uncomplicated. Post-natally she was cared for in high dependency unit and the physicians consulted as well. Improvement was seen clinically and biochemically on the first postoperative day. However, hypoglycaemia took a longer time to stabilise needing 48 h of Dextrose infusion. Subsequent ultrasound of upper abdomen showed features compatible with fatty infiltration of liver. On the fourth post-natal day, her bloods had greatly improved with stabilisation of clotting parameters as well. She was discharged home with plan for follow up in the outpatient clinics (both obstetric and medical). Repeat bloods done 4 weeks later showed normal hepatic and renal function tests. Blood results of Hepatic/renal serology, viral screening were all normal.
Conclusion: AFLP could manifest with common prodromal symptoms, but timely diagnosis avoids a fulminated clinical course. Index of suspicion should be high when women present with atypical pre-eclamptic picture.

P1.193

Abnormal attachment beyond delivery – placenta increta

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Background: Incidence of placenta accreta in an unscarred uterus and in the absence of placenta praevia is extremely rare (one in 22 000). There is paucity of evidence to support conservative

management for such an unexpected finding. We report a unique case of placenta increta in an unscarred uterus and its subsequent management and present a literature review.

Case Report: Twenty-eight year-old woman booked with us at 12 weeks in her second pregnancy (her first child was born vaginally at 36 weeks of gestation with no problems in third stage). Anomaly scan confirmed a fundal placenta. At 36 weeks of gestation, an emergency lower segment caesarean section (LSCS) was done under general anaesthesia for breech presentation in labour and pathological cardio-toco-gram. Baby was delivered in good condition. However, placental separation was not achieved by controlled cord traction and uterus felt to be bicornuate on palpation. The latter was confirmed on exteriorisation of uterus (photo 1) and placenta seen through the right horn (photo 2). The ramifications of placental veins were seen clearly from the outside and no plane of cleavage identified. A Consultant Obstetrician attended and decision was taken to manage the woman conservatively since bleeding was not excessive. Cord was clamped and cut as close to the placental cotyledon as possible. Uterine incision was closed with haemostasis and uterotonics (syntometrine and syntocinon infusion) given as prophylaxis to keep the uterus contracted; estimated blood loss was 700 mL at LSCS. She made a good postoperative recovery, was discharged on the fourth postnatal day with broad-spectrum antibiotic cover and follow up done with serial ultrasounds and β-hCG. However, after 4 weeks of conservative management, she became septic with temperature of 40 Celsius and raised inflammatory markers. Sepsis did not ameliorate with antibiotics and hysterectomy was performed. Placenta was still adherent to the right horn of a bulky uterus (photo 3 and 4). Hysterectomy was without any complications and she was discharged home on the seventh postoperative day.

Conclusion: Obstetricians need to be aware that though uncommon, an unscarred uterus can still be associated with abnormal placentation and in the event of an emergency, efforts should not be made to remove the placenta risking a massive postpartum haemorrhage. Spontaneous resolution of placenta can be encouraged through conservative management, but needs regular follow with an option of hysterectomy if the former fails. The window period gives an opportunity to counsel women appropriately.

P1.194

Megaloblastic anaemia mimicking HELLP syndrome

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Background: Vitamin B12 and folate deficiency complicates up to 30% of all pregnancies.[1] However it is rare for megaloblastosis to develop, leading to a combination of haemolysis and thrombocytopenia. This can be misinterpreted as HELLP syndrome (haemolysis, elevated liver enzymes and low platelets).[2,3,4] It is therefore important to identify the cause to allow for appropriate management.

Case Description: A 21 year old woman, gravida 3 para 1, 34 weeks of gestation (previous caesarean section) presented with 14 days history of nausea, vomiting, blurred vision, intermittent abdominal pain and bilateral leg cramps. Blood pressure was normal, there was no proteinuria and fetal assessment was normal. Blood test revealed severe pancytopenia, haemolysis, deranged liver function and vitamin B12 & folate deficiency. There was a debate whether the diagnosis was HELLP syndrome or severe B12 deficiency and the timing of delivery. Blood film analysis revealed features pathognomonic of vitamin B12 deficiency. Treatment was conservative with replacement of B12 and folate. Symptomatic anaemia was corrected with blood transfusion. Blood film changes were noted from Day 5 and at Day 10 haemoglobin and platelet count was in the normal range. Pregnancy subsequently progressed to term and she had an uneventful delivery at 39 weeks.

Discussion: This case demonstrates the rare and serious complication of severe B12 and folate deficiency. It highlights the importance of correlating laboratory findings with the clinical picture and also the value of involving the multi-disciplinary team. Correct diagnosis in this case enabled appropriate management and avoided a high risk pre-term delivery.

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P1.195

Accuracy of first trimester uterine artery Doppler in predicting pre-eclampsia and intrauterine growth restriction: a meta analysis of 55 091 pregnancies

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Objective: To evaluate the accuracy of first trimester uterine artery Doppler in predicting pre-eclampsia and IUGR by systematic review.

Methods: We searched Medline (1951–2011), Embase (1980–2011) and the Cochrane Library (2011) and identified relevant

studies without any language restrictions. Studies were selected if they evaluated the accuracy of first trimester uterine artery Doppler to predict pre-eclampsia and IUGR. Two reviewers independently selected the studies and performed data extraction to construct 2 × 2 tables. We calculated sensitivity, specificity and likelihood ratios of various Doppler indices for the above outcomes.

Results: From 1866 citations, we identified 11 studies (43 122 women) that evaluated the role of uterine artery Doppler in the first trimester for the prediction of pre-eclampsia and nine studies (31 300 women) for intrauterine growth restriction (IUGR). The overall sensitivity of first trimester uterine artery Doppler in predicting pre-eclampsia and IUGR were 0.28 (95% CI 0.22, 0.33) and 0.15 (95% CI 0.12, 0.19). The overall specificity of first trimester uterine artery Doppler in predicting pre-eclampsia and IUGR were 0.90 (95% CI 0.81, 0.95) and 0.93 (95% CI 0.91, 0.95). The uterine artery notching in prediction of early onset IUGR had the highest sensitivity 0.58 (95% CI 0.50, 0.63), with a specificity of 0.56 (95% CI 0.50, 0.63) and positive LR of 1.33 (95% CI 1.22, 1.46). The uterine artery Doppler abnormal wave had the highest specificity of 0.93 (95% CI 0.91, 0.95) in IUGR with the FPR of 7%. In women with early onset pre-eclampsia, abnormal wave pattern in uterine artery Doppler predicted pre-eclampsia with a pooled positive likelihood ratio of 7.66 (95% CI 5.26, 11.16), while a negative test result had a pooled likelihood ratio of 0.53 (95% CI 0.42, 0.67) and the diagnostic odd ratio was 14.40. The abnormal wave pattern in uterine artery Doppler predicted early onset IUGR with a pooled positive likelihood ratio of 6.28 (95% CI 3.13, 12.61), while a negative test result had a pooled likelihood ratio of 0.57 (95% CI 0.33, 0.97) and the diagnostic odd ratio was 11.10.

Conclusion: Abnormal uterine artery Doppler in first trimester has high specificity and low sensitivity in predicting both early onset pre-eclampsia and IUGR. An abnormal test result is more likely important to 'rule in' the condition and less likely to 'rule out'. First trimester Doppler is a useful tool to stratify the women by risk status to target them for clinical management and research purposes.

P1.196
A prospective audit of vaginal birth after caesarean section (VBAC) practice at a university hospital in the UK

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Objective: The Royal College of Obstetricians and Gynaecologists (RCOG) Guideline No. 45, February 2007 states that all women with a history of a previous caesarean delivery should be carefully counselled and given the option of an attempt at vaginal birth after caesarean section (VBAC). Counselling should include information on rupture of the uterus or uterine scar. Antenatal counselling of these women should be clearly documented in their hospital case notes. The Clinical Negligence Scheme for Trusts (CNST) handles all negligence claims against NHS member bodies and examines standards of care to determine the level of culpability. The objective of this study was to audit the management of women with such a history of previous caesarean section and assess care given against CNST standards.

Methods: The medical records of 100 women who underwent one caesarean section previously were randomly selected. These patients were admitted from November 2011 to January 2012. Notes were reviewed prospectively in the postnatal unit and compared to CNST standards of documentation. Data obtained included documentation of the individual management plan in labour, plan for induction of labour, foetal heart rate monitoring and risk of uterine scar rupture.

Results: Seventy-five (75%) women opted for a VBAC. A discussion of the mode of delivery was documented in 96% patients. Individual management plans for labour were documented in 40 (53.3%). Forty-three (57.3%) of our patients had a plan documented for preterm labour whilst a post-dated plan if the patient did not go into spontaneous labour was documented in 54 (72%). This was documented in 46 (61.3%) of our patients. Only 37.3% of our patients had an induction of labour. In our series, the rate of caesarean section was 49.3%, whilst 38 (50.67%) patients had a successful VBAC. This was lower than RCOG quoted figures. The main indication for caesarean section was failure to progress (32.4%) and most of the newborn (93%) of babies did not require resuscitation.

Conclusion: Our documentation in comparison to CNST requirements needs some improvement. We achieved a successful VBAC rate of 50.6% in our study, which is lower than national quoted figures. There were no adverse outcomes in our series.

P1.197
Pregnancy outcome following suboptimal rise in β-hCG in early pregnancy

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Background: Suboptimal rise in β-hCGs in early pregnancy poses a great clinical dilemma – either an ectopic pregnancy or a miscarriage.

Objective: To look at the pregnancy outcome of women who had suboptimal rise in β-hCGs at Worcestershire acute NHS trust. Audit the management of these women against the hospital guidelines.

Methods: Case notes of women with suboptimal rise in β-hCGs from May to November 2009 at Worcestershire Acute hospitals were isolated and analysed.

Results: Thirty-three cases were isolated. Two persons had ongoing pregnancy. Seventeen persons had ectopic pregnancy. Fourteen persons had miscarriage.

Summary: Thirty-three persons had sub optimal rises in β-hCGs. Seventeenpersons had ectopic(50%). Ten persons had medical management of ectopic pregnancy. Three women needed to have repeat dose of methotrexate(30%). Six patients had salphingectomy (35%). Anti D is given appropriately.

Conclusion: Suboptimal rise in β-hCGs could occur even in intra uterine pregnancies. Ectopic pregnancy could occur even in higher β-hCG values. To counsel women for medical management of ectopic and to avoid doing too many β-hCGs.

P1.198

Two cases of placenta praevia accreta with no blood transfusion

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Placenta praevia major with accreta is associated with significant maternal morbidity and mortality. We describe two cases of major placenta praevia with accreta. Both patients were managed successfully without significant morbidity and did not require any blood transfusion.

Case 1: A 31-year old Malay woman G6P3 + 2 with history of three previous scars was diagnosed with low lying placenta at 25 weeks of gestation following an episode of per vaginal bleeding. Repeat scan at 28 weeks showed placenta praevia major (type 3 anterior) and ultrasound Doppler was highly suggestive of accreta. She was admitted to the ward for expectant management. She had multiple episodes of minimal bleeding as in-patient. Couple were counselled regarding risk of morbidly adherent placenta requiring hysterectomy and massive obstetric haemorrhage. Emergency caesarean section was performed at 33 week 5 days due to a significant episode of per vaginal bleeding. Delivery was performed by a consultant and incision was made at upper segment. Intra-operatively, placenta was found to be morbidly adherent therefore proceeded with caesarean hysterectomy without attempting manual removal of placenta. Estimated blood loss was 800cc and blood transfusion was not required. Baby was delivered with a good Apgar score. Diagnosis of placenta accreta was confirmed by histopathology report.

Case 2: A 35-year old Malay woman G5P4 with history of 2 previous caesarean section presented at 31 weeks gestation with history of antepartum haemorrhage and ultrasound scan revealed placenta praevia major (type 3 anterior). She was admitted to the ward for expectant management. However she requested for discharge against medical advice and defaulted her follow up. Ultrasound Doppler was not done. At 36 weeks of gestation, she presented with significant per vaginal bleeding. Emergency caesarean section was done by consultant and incision was made at upper segment. Controlled cord traction was done with no separation of the placenta, therefore decision was made to proceed with caesarean hysterectomy. Estimated blood loss was 1.5 L however, no blood transfusion was required as the patient remained haemodynamically stable. Baby was delivered with a good Apgar Score. Histopathology report confirmed diagnosis of placenta accreta.

Conclusion: Antenatal assessment of placenta accreta and multidisciplinary approach involving senior obstetrician, senior anaesthetist & blood bank can reduce morbidity associated with placenta accreta. Early diagnosis of accreta intraoperatively without attempt to manually remove the placenta when it does not separate spontaneously will also reduce surgical risk and need for blood transfusion.

P1.199

Managing mental health for women with previous history of schizophrenia during pregnancy – how can we improve our care?

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Introduction: Mental disorders are no less common in pregnancy than at other times in a woman's life. Anxiety and depression are common, and women with pre-existing major mental disorders, such as schizophrenia, are at greater risk of compromised maternity care, delivery complications and relapse in pregnancy and the postpartum period. Raising awareness is therefore necessary among service providers as well as service user. Many mothers who experience mental health problems have the additional stress of not being taken seriously by family, friends and health professionals.

Objective: To audit our management of women with schizophrenia and to high lighten the knowledge of healthcare professionals regarding the availability of good sources of local support and methods of accessing them.

Methods: This was a retrospective study. Data was analysed from December 2010 to December 2011. Only pregnant women with history of schizophrenia were included.

Results: From our study we have identified seven women with severe mental health problems out of which four had severe schizophrenia. All four women achieved vaginal deliveries. There was clear lack of awareness about management among the health professionals. There was one admission to mother and baby unit.

Conclusion: The contemporary management of schizophrenia goes well beyond simply prescribing medications that suppress patient's symptoms. Successful management requires that physicians address and treat both a patient's entire mental and physical health. For this reason it is also important to consider how medication side effects may affect lifestyle and wellbeing, as well as how these side effects influence patient adherence to treatment. Each health authority need to establish a perinatal mental health strategy, ensuring that core standards are met and core functions are provided by specialist perinatal psychiatric services. The way in which the services are delivered will be developed to suit the needs of the particular locality.

P1.200

A complicated case of small bowel obstruction in pregnancy: a case report and review of literature

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Background: Small bowel obstruction is rare during pregnancy. When present, diagnosis is challenging as the clinical picture can mimic pregnancy symptoms. It is often associated with high maternal and foetal morbidity and mortality due to delay in diagnosis. We would like to illustrate this by a case of small bowel obstruction in pregnancy managed in our unit.

Case: A 29 year old primigravida, presented at 31 weeks of gestation with severe epigastric pain, nausea and decreased

appetite. She had no complaints of vomiting or obstipation. She had previously undergone emergency appendicectomy and sigmoid colectomy for volvulus. An ultrasound scan of the abdomen showed no intra-abdominal pathology and the patient was managed conservatively with fluid support, analgesia, prophylactic clexane and steroids for fetal lung maturation. On the third day, she developed faeculent vomiting and a repeat ultrasound scan revealed multiple dilated loops of small bowel, highly suggestive of small bowel obstruction. The patient underwent emergency exploratory laparotomy and adhesiolysis accompanied by emergency caesarean section to facilitate access to the bowel. Intraoperatively, there were multiple adhesions around both proximal small bowel and mid-ileum causing complete obstruction. The baby was delivered in good condition and transferred to Special Care Baby Unit. Postoperatively, the patient had a protracted stay in the hospital as she developed multiple pulmonary emboli treated with anticoagulation, while in ITU. On day 10, she developed wound dehiscence which was treated with vacuum assisted closure.

Discussion: The incidence of acute abdomen during pregnancy is one in 500–635 pregnancies. Small bowel obstruction accounts for around 15% of the cases, having an incidence of 1:17 000 pregnancies. The predisposing conditions include previous abdominal surgery, most commonly gastric bypass, previous ruptured uterus, enlarged uterus in multiple pregnancies or co-existent fibroids, carcinoma, hernia and appendicitis. Clinical diagnosis is difficult, as in our case. Any pregnant woman presented with nausea/vomiting and abdominal pain should alert the clinician for possible abdominal cause. Ultrasound is ideal for initial evaluation, but further plain films or MRI scan be used to confirm the diagnosis in equivocal cases, however there is reluctance by clinicians to undertake imaging studies with concerns due to long term effects on the fetus. Prompt diagnosis and early surgical management is the cornerstone for a good outcome as unnecessary delay may increase morbidity for both mother and fetus.

P1.201
A case of massive primary postpartum haemorrhage with previous myomectomy and a possible arteriovenous malformation

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Background: Postpartum haemorrhage (PPH) is a leading cause of maternal mortality in the UK as well as worldwide. It still presents a major challenge to obstetricians and there has been increasing awareness of the diagnosis and/or management of rare causes of intractable uterine bleeding from arteriovenous malformations (AVM) involving the uterine artery.

Patient: A 38 year-old woman, 2 years after an abdominal myomectomy involving a posterior uterine incision, presented with abnormally dilated blood vessels on the posterior uterine wall on dating scans at 5 and at 7 weeks of gestation. The antenatal period was complicated by a small antepartum haemorrhage at 32 weeks of gestation. In labour at term, heavy bleeding was noted at full dilatation leading to a ventouse delivery. Delivery was followed by massive bleeding attributed to vaginal and cervical trauma. A postero-lateral cervical tear was identified as the major contributor. Bleeding resolved with suturing of the tears and no further surgical intervention was required. Postnatally the dilated vessels were noted to persist on transvaginal scan and MRI imaging will be used to evaluate the possibility of an acquired AVM and therefore plan management of any subsequent pregnancy.

Conclusion: Our case presents the possibility of neovacularisation or a pseudoaneurysm/acquired arteriovenous malformation of a cervical vessel arising from a posterior uterine scar at open myomectomy; leading to massive primary PPH, but which did not require hysterectomy or interventional radiology for resolution.

P1.202
Unscheduled admissions in women with prior caesarean birth and planned for delivery by elective caesarean

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Background: Up to 10% women go into labour prior to the scheduled date at 39 weeks. When patients choose elective repeat caesarean section they may expect to avoid maternal as well as fetal complications that can occur during labour.

Aims: To Identify the reasons for unscheduled admissions, whether managed promptly, complications, and their mode of delivery

Methods: All patients who were booked for elective caesarean section but were admitted and delivered prior to the planned date were identified.

Study Design: Retrospective analysis of case notes. The study period was between 1st December 2009 and 31st November 2010.

Results: Sixty patients were identified: 82% had one, 13% had two and the rest three previous caesarean section (CS). In 82% CS was planned for 39 weeks of gestation. The rest were planned for CS between 36 and 38 weeks due to other complications. Reasons for admission: Majority (47%) needed admission at 38 weeks. Forty-eight percent presented with labour, 17% with PROM, and others with APH(5%), decreased fetal movements (1/60), and monitoring for medical complications (6.6%). Management on admission: Most women were seen by medical staff within 45 min of admission. From triage 28% were admitted to labour ward, 67% to the maternity ward and one went straight to theatre. Forty percent went into labour whilst being observed as inpatients and another 18% showed evidence of fetal distress. Thirty percent were delivered within 6 h of admission. Complications noted were scar dehiscence in three women (one was complete, baby's face presenting at laparotomy), hole in lower segment (1), longitudinal tear lower segment (2), angle extension (1), major blood loss (3 – abruption 1), thick meconium (2), SCBU admission (5- preterm 2, IUGR-1, maternal diabetes-1, haemolytic disease-1). There was one stillbirth due to abruption. Mode of delivery: Mode of delivery was CS in 87%.

Discussion: Timing of elective CS has become increasingly important as more and more women now request CS. Benefits of delayed CS need to be balanced against risk of spontaneous labour

prior to planned date of delivery for women with prior CS. Although the number of patients in the study was small, a significant number of women delivered between 38 and 39 weeks of gestation (28/60). Effort should be taken whenever possible to reduce the risks of emergency CS in women with prior CS especially if planned for delivery.

P1.203

The risk factors and outcome of third and fourth degree perineal tear following vaginal delivery

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Objective: The aims of this study were to identify the risk factors, repairing techniques and the outcomes implicating third and fourth degree perineal tear.
Methods: Retrospective study, obtaining data from the delivery suite and patient's notes form 2008–2011. Following retrieval of the notes, all data was filled up in the data collection sheets.
Result: There were 29 cases of extensive perineal injury reported with 69% of third degree tear. The 3A (involved <50% of the external anal sphincter) was the highest incident (11 cases) followed by 3B and 3C with six and three cases respectively. There were nine cases of fourth degree tear (31%). Out of those, primigravida, maternal obesity, instrumental deliveries were significant associated risk factors identified. Absorbable coated polyglactin sutures were used for sphincters repair in all cases with either overlapping or end-to-end techniques with no reported case of failure. There was no incidence of flatus or faecal incontinence documented following postpartum.
Conclusion: Primigravida, maternal obesity and instrumental deliveries were the recognizable risk factors. However, the outcome of perineal trauma following overlapping or end-to-end technique using polyglactin sutures had a comparable excellent outcome.

P1.204

Teenage pregnancy: maternal & fetal outcomes

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Introduction: Although teenage pregnancy is reducing, rates remain relatively high and vary worldwide. Some important factors like socioeconomic deprivation, disrupted family structure and limited education appear to be most consistently related to teenage pregnancy. Many adverse outcomes have been shown associated with teenage pregnancy including premature delivery, small for gestational age, low birthweight and increased neonatal mortality, anaemia and gestational hypertension.
Objective: To determine the maternal and fetal outcomes of teenage pregnancy and to compare with normal population (non teenage pregnancy).
Methods: The study was a cross-sectional design carried out at Hospital Universiti Sains Malaysia (HUSM), Kelantan. All nulliparous women aged 19 or less (≤19 years old) and at gestation age of more than 24 weeeks were included as teenage group (study group). The non teenage group (control group) were recruited from nulliparous women aged 20–34 years who delivered following delivering of each teenage pregnancy group. Data was compiled and analysed using the SPSS software version 12. A probability level (P-value) of <0.05 was considered as statistically significant.
Results: A total of 488 pregnant nulliparous women participated in this study. They were divided into two groups, the teenage pregnancy group (study group, $n = 244$) and the non teenage pregnancy group (control group, $n = 244$). The teenage group were found to be significantly higher incidence of lower educational level, delay in booking, unmarried, premarital conception, rape cases, spontaneous vaginal deliveries, low birthweight, premature delivery, NICU admission and congenital abnormality (P-value < 0.05). There is however no significant difference in the incidence of hypertension, anaemia and antepartum haemorrhage.
Conclusion: Teenage pregnancy group noted to have more adverse fetal outcomes such as higher incidence of lower birthweight, premature labour and congenital abnormality compare to control group. However they had more successful spontaneous vaginal delivery, with lower incidence of caesarean section and instrumental delivery compare to control group.

P1.205

Achondroplasia and pregnancy – a case report

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Objective: To present a case of achondroplasia and pregnancy complications encountered.
Methods: Case report and discussion of management of pregnancy complications with the background of current evidence and knowledge of achondroplasia.
Results: The incidence of achondroplasia is about one in 15 000 to one in 40 000. It is an autosomal dominant condition, but 80% of cases are de novo mutations. Patients have abnormal endochondral bone formation due to mutation in fibroblast growth factor receptor-3. They exhibit short stature with neurological and skeletal abnormalities that cause them to have poor respiratory and cardiovascular reserve. There are a few reported cases with favourable pregnancy outcomes. We present management of pregnancy and delivery of an achondroplastic dwarf with a height of 99 cm and BMI of 36. Four years ago, she had severe scoliosis requiring spinal surgery, which was complicated by difficult intubation necessitating tracheostomy. She was counselled in detail about the risks of pregnancy and delivery complications and declined termination of this pregnancy. At 32 weeks an elective caesarean section was performed under general anaesthetic for poor respiratory reserve and worsening tachycardia. She made a slow postnatal recovery that was complicated by atelectasis requiring intensive care.

Conclusion: Women with achondroplasia have normal mental and sexual development. Pregnancy management is challenging with achondroplasia. There are similar case reports in the literature that provide some guidance in their management strategies. A multidisciplinary team input and plan is required from the first trimester.

P1.206
Emery-Dreifuss muscular dystrophy – case report and discussion of pregnancy complications

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Objective: To discuss a case report of Emery-Dreifuss muscular dystrophy and pregnancy complications associated with this condition.
Methods: Case details noted. Literature search using online databases including OVID and MEDLINE. Case report and discussion around current evidence in management of such cases.
Results: Emery-Dreifuss muscular dystrophy (EDMD) is characterised by a triad of progressive myopathic changes in skeletal muscles, early contractures of the neck, elbow, ankle and cardiac conduction defects. The incidence is one in 100 000. Pregnancy complications include respiratory problems, cardiomyopathy, preterm delivery, low birthweight and cephalopelvic disproportion. We present a case of known EDMD diagnosed as a child. She booked at a height of 145 cm and weighed 35 kg. Her pregnancy was a result of ovulation induction by Letrozole. She had dual chamber automated implantable cardiac defibrillator inserted last year because of the high risk of sudden cardiac death associated with her condition. She has regular follow up at the breathing support clinic. Being wheel chair bound, she had reduced mobility and was commenced on thromboprophylaxis. She developed pre-eclampsia at 26 weeks and was delivered at 28 weeks by caesarean section under regional anaesthetic. Her recovery was delayed due to a wound infection. She delivered a baby boy who tested positive for a variant of the muscular dystrophy gene.
Conclusion: Women with rare medical disorders have a better quality of life with current advances in medicine and therefore expect to have favourable pregnancy outcomes. Their pregnancy management is challenging with limited literature support and lack of evidence. Careful planning and involvement of various specialities is very important in optimising pregnancy outcomes.

P1.207
A case of abnormally high alpha-fetoprotein (AFP)

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Objective: To present a case of abnormally high alpha-fetoprotein detected during routine second trimester screening and discuss pregnancy complications and outcomes.
Methods: Case report and discussion of current evidence of pregnancy outcomes associated with abnormally high alpha-fetoprotein.
Results: Maternal serum alpha-fetoprotein (AFP) is used as a screening tool in identifying risk of fetal anomalies. Raised AFP levels >2.5 Multiples of Median (MoM) are associated with adverse perinatal outcomes. These include risk of miscarriage, preterm delivery, low birthweight, pre-eclampsia, oligohydramnios and placental abruption. There is also a known association of markedly elevated AFP levels with congenital nephrosis We identified a case with a successful pregnancy outcome where 80 MoM of AFP was noted during the second trimester screening. The risk factors identified were nulliparity and smoking. Diagnostic test in the form of amniocentesis was offered but declined. She was induced at 39 weeks for reduced fetal movements and had a forceps delivery for a non-reassuring CTG. She had a favourable pregnancy outcome and delivered a baby girl in good condition. Interpretation: Fetal liver and yolk sac secrete AFP, with smaller contribution from the fetal gut. Therefore, high levels should raise suspicion of abnormality of any of these organs. Here we discuss the challenges of investigations and management of this pregnancy on limited information available.
Conclusion: This level of AFP has not been documented before and we have limited evidence on the effects of such a high level of AFP on the pregnancy outcomes. This is a rare finding and therefore not possible to have enough cases for research. Identifying similar cases in the literature will aid management of such pregnancies.

P1.208
Overt and covert postpartum urinary retention, risk factors and complications – a cohort study at Hospital Tengku Ampuan Afzan (HTAA), Kuantan, Pahang, Malaysia

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Introduction/Objective: The risk of postpartum urinary retention (PUR) varies between 0.5% and 14.1% of deliveries. It is higher among the Asian population with prolonged first and second stage of labour, epidural analgesia and previous history of PUR. The objectives were to determine the local incidence of PUR and to evaluate the risk factors and the outcome of PUR.
Methods: A cohort study on women who delivered at HTAA from 1st January to 30th December 2011. The subjects were consented women who were stable, not eclamptic, no severe postpartum haemorrhage or medical illnesses that require routine bladder catheterization. Post void residual urine volume (PVRV) was measuredminimum of 6 h post delivery or when subject complaint of inability to pass urine. They were then catagorised

into three groups: normal (PVRV < 150 mL), overt (symptomatic, PVRV > 150 mL) or covert (asymptomatic, PVRV > 150 mL). They were managed according to a standardised protocol till discharged. All subjects had a minimum of six months follow up or till the problem resolved.

Results: There were 1000 women recruited. This preliminary result is on 414 women who had completed their follow up. The study subjects were mainly aged between 20 and 30 years (56.2%), Malay ethnic group (89.3%), obese (41.3%), low parity (80.9%) and had vaginal delivery (74.8%). There were two cases (0.48%) of overt and 13 cases (3.14%) of covert PUR. Majority of women (96.38%) had PVRV of <150 mL. There was no statistical different of PUR in relation to mode of delivery ($P = 0.063$), parity ($P = 0.224$), type of analgesic ($P = 0.100$), baby weight ($P = 0.700$) and time of voiding ($P = 0.07$) except for type of perineal wound ($P = 0.01$). Episiotomy causes significantly increased in PUR. Regarding covert PUR, 61.5% had urinary tract infection (UTI), 92.30% had an episiotomy wound and 69.23% resolved within 24 h. Both covert and overt PUR resolved spontaneously without complication.

Conclusion: Risk of PUR was 3.62% which is compatible with others and had no serious complication. PUR was significantly associated with UTI and episiotomy.

P1.209
Case of methylene blue in severe obstetric sepsis

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This is a case of 23 years old G2P1 who was transferred to a tertiary unit at 23 weeks + 3 days following premature repture of membranes. In the past history she has previous normal vaginal delivery and 1 week before this admission she was treated with antibiotics for urinary tract infection. She was given steroids and counselled about fetal loss and decided for delivery with no fetal resuscitation. On the following day she started be pyrexial and tachycardic and was moved to the labour ward. She started on intravenous antibiotics following blood culturs. She delivered a stillborn later that day but suddenly deteriorated with septic shock and hypotension not responsive to fluid resuscitation. She also reported chest pain and was transferred to the intensive care unit. Her antibiotics were reviewed and changed. She needed adrenalin infusion and ended up with intubation. Imaging proved lung consolidation and she had coagulation system failure as we as renal failure with deranged liver function. She had persistent hypotenstion despite steroids and vasopressin with worsening lactic acidosis. Despite adding doxapamine her systemic vascular resistance(SVR) dropped persistently to 200. Methylene blue was started at 1 mg/kg blous and the infusion of 0.25 μg/kg/h. Her SVR improved to 800 with remarkable immediate improvement in the acid base balance and cardiac index. Her cultures grew *E. coli* and over 24 h she was further improving with decreased requirement of ionotrops. She was extubated in 48 h and her DIC was treated with blood products. She was fully conscious but developed severe facial herpes which was treated with acyclovir intravenously. She was dischared on day 8 from her hospital admission. Sepsis started to jump the ladder a case of maternal morbidity and mortality. Many units including our unit have developed sepsis bundle system of awarness and prompt timely management of sepsis before it get to the stage of mutliorgan failure. Methylene blue has long been used in cases of malaria and series started to show its value in severe hypotension due to sepsis by normalising NO content. In addition to the blue coloration of tissues it could worsen coagulation problems. There is no documented role in using it prophylactically and it is still can be considered as desperate measure to try in protracted cases due to the need of more strong evidence.

P1.210
Anaemia in pregnancy

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Objective: Iron deficiency anaemia is associated with adverse pregnancy outcomes whilst treatment can reduce its morbidity. Although 30–40% pregnant woman in developed countries have iron depletion, routine antenatal iron supplement is not recommended. We sought to study the incidence of anaemia in our pregnant women.

Methods: All women who delivered between 1st February and 31st March 2011 to were approached postnatally and enrolled if they consented to be interviewed on their antenatal iron supplementation. Further data were obtained from clinical notes. Statistical analysis was performed using Microsoft Excel and Simple Interactive Statistical Analysis.

Results: One hundred and forty-six women consented to be interviewed post-natally. Six women were excluded as they had haemoglobinopathy. A further 7 and 35 were excluded as they did not have their 28 weeks and pre-delivery Hb respectively. Thirty-nine (39.8%) of 98 women analysed were found to be anaemic: 13 (33.3%) at booking, 19 (48.7%) at 28 weeks, and seven (17.9%) in labour. There were no difference in maternal age, gravity, parity, white ethinicity ratio, vegetarian ratio, smoking, alcohol intake, BMI, booking ferritin, iron supplement intake, delivery gestation, LSCS rate, male infant ratio, birth weight, Apgar scores, delivery blood loss, blood transfusion need, length of post-natal stay between women who were anaemic at booking and those who developed anaemia subsequently. However, the former had significantly lower booking haemoglobin, MCV, MCHC, and risk of not being on iron supplement prior to diagnosis. Compared with women who did not develop anaemia, women who became anaemic in pregnancy were of higher parity, non-White ethnicity (84.6% vs. 62.7%, $P = 0.023$), have lower booking ferritin (33.87 ± 26.05 vs. 61.07 ± 56.76, $P = 0.007$), earlier delivery (38.8 ± 1.7 vs. 39.9 ± 1.4 weeks, $P = 0.001$), female infant (53.8% vs. 49.2%, $P = 0.001$). Interestingly, they also have less fall in haemoglobin level post delivery (1.26 ± 1.31 vs. 2.40 ± 1.44 g/dL, $P = 0.001$). Seven of the 13 women anaemic at booking could recall their compliance with iron supplement. 83.3% of the compliant women had normal haemoglobin in labour, compared with none who were non-compliant. Similarly, in those who developed anaemia at 28 weeks, 66.7% resolved with treatment

compliance compared to none in the woman who 'forgot' about the treatment.
Conclusions: Anaemia is prevalent in our pregnant women, mainly developing during the course of the pregnancy. Early identification affords iron therapy which resolves most anaemia pre-labour. The routine active management of third stage of labour in anaemic women may explain lower blood loss at delivery.

P1.211
Reasonability of lung to head ratio (LHR) and observed to expected (O/E) LHR in relationship of neonatal mortality and respiratory morbidity in fetuses with congenital diaphragmatic hernia (CDH)

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Objective: Pulmonary hypoplasia in congenital diaphragmatic hernia (CDH) is strongly associated with high mortality and severe respiratory morbidity. Accurate measurement of the lung volume in prenatally diagnosed CDH is essential for prognosis and potential treatment in utero. The aim of the study was to investigate the role of prenatal ultrasound findings in assessing prognosis in fetuses with CDH.
Methods: We examined the relationship between various ultrasound measurements and neonatal mortality in prenatally diagnosed CDH fetuses admitted to our tertiary perinatal center. Statistical analysis was performed using SPSS software.
Results: Survival rate in the study group was 60% (24/40). The measurement of lung-to-head ratio (LHR) and observed/expected LHR (O/E LHR) was performed in 38 CDH cases. Independent samples *t*-test disclosed no statistically significant relation between survival and LHR (non-survival: 1.6; vs. survival: 2.12; $P = 0.195$) and O/E LHR (non-survival: 58 ± 24 resp. 70 ± 21, $P = 0.188$). The liver up was diagnosed prenatally in the 21 of the 40 fetuses (53%) and postnatally within surgery in the 22 patients. Independent samples *t*-test proved no statistically significant correlation between hepar position and LHR (hepar down LHR: 2.23 ± 1.04 vs. hepar up LHR: 1.73 ± 1.02, $P = 0.195$) and O/E LHR (hepar down O/E LHR: 73 ± 21 resp. 60 ± 23, $P = 0.06$). We have found statistically significant relation between survival and the type of CDH, the presence of polyhydramnion and hepar in the chest. No difference was recorded in the need of amniodrainage.
Conclusion: In our study the value of LHR and O/E LHR seems not to be accurate predictive factor of mortality in prenatally diagnosed CDH. The type of CDH, the presence of polyhydramnion and position of the hepar are better prognostic parameters. The value of LHR and O/E LHR is highly probably not influenced by liver position.
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P1.212
Hyponatremia in pre-eclampsia – rare but easily missed

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Objective: Hyponatraemia in pre-eclampsia is a rare but potentially fatal complication. Maternal symptoms include headache, lethargy, nausea, drowsiness, muscle cramps, confusion, convulsions and coma. Death can occur in up to 50% of cases if the serum sodium falls below 120 mmol/L. Fetal and neonatal hyponatremia as a consequence can cause polyhydramnios, jaundice and tachypnoea of the newborn. Neonatal seizures can occur if serum sodium level falls below 130 mmol/L. Maternal symptoms can easily be mistaken for pre-eclampsia and even eclampsia. A literature review from 1998 to 2011 revealed nine case reports. We are reporting the 10th from our hospital in 2011 to remind obstetricians of the need to be aware of this complication and manage it appropriately.
Results: A 33 year old primigravidae booked at 9 weeks with a normal blood pressure (BP) and urine analysis. She had a 1:8 risk of Down syndrome on quadruple serum screening but declined invasive testing. Fetal growth surveillance by ultrasound was arranged. She attended regular antenatal checks which were uneventful. At 30 weeks and 6 days gestation, a blood pressure of 140/80 mm Hg with 2 plus proteinuria (PCR 135) was noted. Her blood screen for pre-eclampsia was normal. Twenty-four hour urine collection showed a total protein of 0.7 g. She was admitted at 32 weeks and 4 days of gestation with headache, a BP of 132/80 mm Hg and 3 plus proteinuria. Ultrasound revealed a growth restricted fetus with cerebral redistribution. Her serum biochemistry showed a sodium of 129, potassium of 4.9 mmol/L and a Urate level of 0.44. Platelet count and haematocrit were normal. An ultrasound of the kidney, ureter and bladder was normal. Two weeks later the PCR was 686, with a sodium of 120 and potassium of 5.3 mmol/L. The Blood pressure was 147/93 mm of Hg. An ECG was normal. Treatment with oral salts and 0.9% saline, and labetolol was commenced. A decision was taken to deliver her by Caesarean section 2 days later as the sodium level fell to 118 mmol/L, Doppler's of the umbilical artery remained normal. The baby's weight was 1.5 kg, with good APGARs and normal cord blood gases. The baby had a sodium level on Day 1 of 131 and later that day 133 mmol/L.
Conclusion: Hyponatraemia in pre-eclampsia is rare but must be picked up early and managed appropriately to prevent complication in both mother and baby.

P1.213
Rare complication of hyperemesis gravidarum: Wernicke–Korsakoff syndrome

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Introduction: Hyperemesis gravidarum (HG) is a potential dangerous disease which may lead to several serious

complications. Wernivke-Korsakoff syndrome is a rare but serious neurological complication of HG.
Objective: We report this case with a litrature review, to raise awareness of such serious, yet treatable neurological disorder.
Case: A 27 year-old Saudi housewife, admitted to the OB/GYN wad via the Emergency Room (ER) on 19th January, 2011 as a case of hyperemesis gravidarum complicating 16 weeks of gestation. She had two normal full term deliveries and one first trimester miscarriage. She had nausea and vomiting in all previous pregnancies. During the current pregnancy, she presented to the ER four times with nausea and vomiting. Admission was offered in three occasions but declined. She had been managed with supportive fluids and anti-emetics. On admission she had persistent vomiting, double vision, dizziness and ataxia. She was mentally disturbed with loss of short memory. Clinical diagnosis of Wernicke Korsakoff syndrome was made and supported by marked thiamine deficiency. Thiamine supplementation was then added to the intravenous fluid and electrolyte replacement with resultant of dramatic improvement. She stayed in for 2 weeks before being discharged in a good condition with residual impairment of short memory and mild nystagmus. Antenatal follow up was satisfactory and at 32 weeks she was free of all neurological disorders. At 39 weeks, she delivered to healthy baby boy by caesarean section, done for breech presentation. Both mother and baby were discharged in a good condition.
Conclusion: Wenicke–Korsakoff syndrome may result from neglected or inappropriately managed hyperemesis gravidarum. Being aware of this possibility is the key point in managing this serious condition, as the treatment is usually available and successful.

P1.214
Case report of successful 6-week delayed interval twin delivery

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Objective: The incidence of twin pregnancy has markedly increased with the prevalence of assisted reproductive techniques and increasing maternal age. Multiple pregnancy poses risk for both mother and fetuses. The greatest risk is preterm delivery followed by the increase in neonatal morbidity and mortality associated with prematurity. Attention has been paid to the method of delaying the birth of the second twin to improve neonatal outcome and decrease neonatal morbidity and mortality in multiple pregnancies. We experienced a case of delayed interval delivery in dichorionic-diamniotic twin in our unit with good neonatal outcome for both twins. The aim of this report is to add our experience to the current literature regarding the best management of this serious obstetrical problem
Methods: We report a case of 40 year old primigravida conceived after 17 years of infertility with ICSI,presented to our unit at 25 weeks 5 days of gestation with diamniotic dichorionic pregnancy and premature preterm rupture of 1st amniotic sac. Three days later at 26 weeks of gestation preterm delivery of 1st twin live male weighing 720 g took place with successful outcome. The 2nd twin was left in utero and the management included vigilant follow up and combination of tocolysis, antibiotics, steroid and cervical encerclage At 32 weeks of gestation (40 days later) 2nd twin male infant of 1.5 kg delivered spontaneous vaginally with good Apgar score.
Results: The implementation of assisted reproduction during the last 20 years has increased the incidence of multiple pregnancies. The unavoidable birth of one premature neonate has led our efforts to the aim of delayed interval delivery for the other twin with good neonatal outcome for both twins.
Conclusions: Controversy persists on the matter of how best to manage such patients with delayed delivery interval of the second twin, perhaps because of the risks associated with asynchronous twins include ascending infection and subsequent chorioamnionitis after delivery of the first twin. Delayed interval pregnancy appears to be safe for the mother and for the fetuses; nevertheless both parents and doctors must realise that success cannot be neither predicted, nor easily achieved. There is absence of agreement regarding the best management of these pregnancies. Each case is a unique medical challenge that must be dealt with the best possible solution.

P1.215
Spontaneous delivery through central rupture of the perineum: a case report

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Objective: Central rupture of the perineum is the worst, but fortunately, the least frequent of the perineal lacerations. It is considered as an injury that produces a passage from the vagina, opening externally between the anus and fourchette. We present a case report in which a home delivery of fetus occurred spontaneously, through the central rupture of the perineum, with the intact vaginal and anal orifice.
Methods: We report a case in which a 24 years old Primipara was presented to a hospital with spontaneous delivery of fetus at home. She had a central perineal rupture, without any lesion of the commissure of the vulva, or anal sphincter. The passage of the infant, umbilical cord, and placenta were through the opening thus formed. Patient labour was not prolonged according to the midwife. The weight of the infant was 3 kg with a normal head circumference and normal height. On examination, her pelvis was adequate and there was a posterior wall vaginal tear. The posterior wall vaginal tear was sutured under anaesthesia and the central perineal wound was sutured in layers. The patient made uneventful postnatal recovery and was discharged home, the next day. At her 6 week postnatal visit no cystocele or rectocele, urinary incontinence or faecal incontinence was observed.
Results: The incidence of central perineal rupture is one in 10 000 births. When the head extends unhindered, it passes over the centre of the perineum. Lessened inclination of the pelvis or deep-set pubic symphysis interferes with this normal method. The pressure and distension on the perineum cause trauma of the posterior wall of the vagina and the pelvic floor whereas perineal skin, posterior commissure and the anus and sphincter remain intact, and the head appears at the centre of the tear through the artificial passage.

Conclusions: Review of literature shows that central rupture of perineum was found most commonly in primigravidae under 25 years of age or in cases where previous tear or scar of perineal operation was present. It is most commonly seen in women with long perineum or narrow rigid vulva with narrow pubic arch or contracted pelvis, cephalic presentation and strong powerful uterine contractions or precipitate labour. In this case report our conclusion is that the central rupture of the perineum could have been prevented by prompt anticipation and timely intervention by episiotomy.

P1.216
Polyhydramnios: maternal and fetal outcome

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Introduction: Polyhydramnios refers to excessive amniotic fluid volume which is associated with adverse pregnancy outcome. We carried out a retrospective study of cases of polyhydramnios detected by antenatal ultrasound scan in three district general hospitals within the Pennine Acute Trust in Manchester, UK.
Objective: To assess fetal and maternal adverse outcomes associated with polyhydramnios and to correlate with its severity.
Methods: Retrospective study of cases diagnosed antenatally, from January to August 2011. Data collected by reviewing the case notes.
Results: Out of the total 72 cases identified, data was collected from 47 cases. The incidence is 1.1% of all deliveries. Amniotic fluid index (AFI) was used for diagnosis in 38 (80%)of cases and maximum pool depth of 8 cm or more in nine cases. Incidence of polyhydramnios was noted to be much higher in one site (2.2%) which used AFI plotted on the centile chart compared to only 0.05% in another site which used deepest pool of 8 cm or more for diagnosis. Thirty-two (69%) cases were mild polyhydramnios and 15 (31%) moderate to severe with AFI more than 30 cm and pool depth 10 cm or more. Seventeen (36%) mums were aged over 35. Of the eight (17%) mums with associated diabetes, two cases happened to be diagnosed following detection of polyhydramnios. No cases of fetal abnormalities were detected antenatally. A TORCH screen was performed in 28 (60%) cases with no positive cases found. A Glucose Tolerance Test (GTT) was performed in 25 (53%) cases and two were positive. Labour was induced in 24 (54%) cases. Twenty-two (46%) women were delivered by LSCS, the most common indications being failure to progress in 1st stage and malpresentation. In 10 (21%) cases, birthweights were over 4 kg. No significant maternal complications were noted. There were two cases of still birth and one case of neonatal death due to laryngeal atresia. Postnatally, one baby was identified with cardiac abnormality requiring surgery.
Conclusion: Polyhydramnios when detected antenatally should be evaluated and followed up appropriately due to associated adverse pregnancy outcomes. We suggest stringent criteria be used for the diagnosis to avoid unnecessary investigations and interventions. Maximum pool depth of 8 cm or more and an AFI of 25 cm or more are suggested diagnostic criteria. Investigations such as TORCH screen should be requested in severe cases or in the presence of other ufltrasound abnormalities suggestive of fetal infection.

P1.217
Role of home blood glucose monitoring in women with previous history of gestational diabetes

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Introduction: The risk of recurrence of gestational diabetes mellitus (GDM) is high in women who have had a previous pregnancy complicated with GDM. Historically, a GTT was used to detect recurrence of GDM in such women but diagnosis was delayed in many cases . NICE suggest early blood glucose monitoring or GTT in these women. The protocol in Royal Oldham Hospital is to commence blood glucose monitoring soon after booking and if the blood sugars are within target at 2224 weeks, GTT at 26 weeks is offered. A retrospective audit was performed to evaluate this protocol.
Aim of the Study: To assess the effectiveness of this protocol in managing women with gestational diabetes.
Results: A total of 25 cases were reviewed who booked for antenatal care between October 2010 to July 2011 at the Royal Oldham Hospital. Of these, 21 women had one previous pregnancy complicated by GDM. The rest had two or more. Seventeen women (68%) were treated by diet alone in the previous pregnancies. In the current pregnancy these women were all referred to the diabetes midwife after booking. Twenty-one women (84%) were referred before 14 weeks and all of them by 17 weeks of gestation. Home blood sugar monitoring was commenced by 14 weeks of gestation in 19 women (76%). Nineteen women (76%) developed GDM in the current pregnancy; of which 17 women had an abnormal blood sugar profile by 22 weeks. Two cases were diagnosed by GTT at 26 weeks but the blood sugar profile was borderline in them at 24 weeks. In five cases, blood sugar profile was abnormal between 12 and 18 weeks. Once blood glucose monitoring was commenced these women were followed up by the diabetes midwife and referred to the multidisciplinary antenatal clinic if blood sugar profile was abnormal. Forty-eight percent cases were managed by diet alone, 40% with insulin and 12% with Metformin. All 25 women had live birth. One baby was diagnosed with bladder outlet obstruction and needed surgery postnatally. There was only one admission in special care baby unit for a baby born at 31 weeks.
Conclusion: Home blood glucose monitoring is an effective tool for detecting recurrence of gestational diabetes early so that timely management will improve the pregnancy outcome. It also creates an opportunity for the women to commence lifestyle management earlier on in pregnancy.

P1.218
Cohort analysis of stillbirth in a tertiary hospital in Malaysia

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Objective: To analyse the characteristic of stillbirth in University Malaya Medical Centre (UMMC).
Methodology: The medical records of patients with the diagnosis of stillbirth (SB) according to ICD10 from June 2008 until June 2010 in UMMC were retrieved and the data was analysed. Demographic data on age, ethnicity, gestational age at delivery, parity were collected. History of co-morbidities in index pregnancy and past pregnancy including diabetes mellitus (DM), Hypertension, Systemic Lupus Erythematous (SLE), antepartum hemorrhage, or other medical or surgical conditions were collected. Patient's age group is divided into three categories which are <20, 21–35, 35> years old. The data were analysed using Krukal–Wallis test.
Results: The rate of stillbirth in UMMC is 9.29% which is higher than the national average of 4. 73.7% are those between 21 and 35 years of age. SB was noted to be highest among the Malays at 54.7%, followed by the Indians 17.9%, Chinese 15.8%, Foreigner 9.5% and others 2.1%. 69.5% of the cases were macerated SB with 14.7% being abnormal morphology and 10.5% with lethal anomaly. Only 10.5% of patients have existing medical illness, of which hypertension and DM is 4.2% each, SLE and other conditions 1.1% each. 72.6% of the cases have no family history of medical illness. 23.2% has family history of diabetes mellitus and only 4.2% have family with thalassemia. 68.4% of SB occurred in <34 weeks of gestation and only 4.2% >40 weeks of gestation. Interestingly there was no significance when we cross patient's co-morbidities against ethnicity and age group, obstetric problems in index pregnancy against ethnicity, and age groups against previous history of SB. However the was significant relationship between patients obstetric problem in index pregnancy with regards to their age groups. Data also showed that there is a relationship for Connective Tissue Disease (CTD) in the different age groups.
Conclusions: This analysis corresponds to the decline of SB cases from recent estimates done for Malaysia. It is similar to that of other developing world. Our SB rate is slightly higher as ICD10 early fetal death definition was used instead of the one use for international comparison. Otherwise, commonly reported maternal risk factors for SB coincide to that of the developed countries. The high Malay predominant SB cases instead of Indian ethnicity as previously reported may have been contributed by the location of our center. Attaining satisfactory documentations still proves to be a challenge.

P1.219
Anal sphincter tear after vaginal delivery: a retrospective study in primiparous women

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Objective: To determine the incidence of anal sphincter tear after vaginal delivery and to define the associated risk factors.
Methods: Retrospective analysis of a population of women having their first vaginal delivery either those with or those without a recognized anal sphincter tear at Hospital Tuanku Jaafar Seremban from 1st January to 31st December 2011. Information on demographics and obstetric information were gathered as well for further analysis.
Results: Anal sphincter tears (3rd and 4th degree) were noted in nine (0.4%) of the 2361 women after first vaginal delivery. Instrumental delivery, larger infant head circumference, longer gestational age, prolonged second stage of labour, higher infant weight and longer maternal age were common in women sustaining anal sphincter tears. Furthermore, instrumental delivery and larger infant head circumference appear to be the most important risk factors for anal sphincter tears.
Conclusions: The results from our study highlight the low prevalence of anal sphincter tears after first vaginal delivery and this is consistent with previous studies. Additionally, instrumental delivery and higher infant head circumference were identified to be the main risk factors. Such information is essential for clinicians to consider for future decisions on obstetric interventions. However, this study cannot be used for statistical interpretation due to small number of samples. Thus, future study shall be conducted on larger samples.

P1.220
An obsessive fascination for an obstetric physician

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Objective: Medical disorders among obstetric patients have been on a rising trend. This has resulted in increased mortality due to indirect cause. The presence of obstetric physicians, who specialise in the care of women with pre-existing or new onset medical problems in pregnancy, would help to reduce deaths from medical disorders among pregnant women.[1] This study seeks to enumerate the burden of medical disorders in pregnancy experienced in Maternity Hospital Kuala Lumpur (MHKL); correlating the effect on maternal mortality, in order to justify the need for an obstetric physician.
Methods: This is a retrospective cross-sectional study conducted using data and records from MHKL. The data used were from combined clinic, obstetric admissions to the high dependency ward and maternal mortality from 2009 to 2011 to give a more recent picture of the clinical problem. Admissions of medical disorders in pregnancy to HDW, with particular interest of the maternal and fetal outcome for cardiac disease complicating pregnancy during the past 3 months were evaluated.

Results: The results show the increasing trend of medical disorders complicating pregnancy from 2009–2011. Combined clinic attendances shows an increasing number of patients, from 744 in 2009 to 909 in 2011. The majority of cases were for cardiac disease. The number of indirect causes of maternal mortality was approximately double that of direct causes, 63.6% (2009), 67% (2010) and 50% (2011). The main indirect cause was attributed to cardiac disease and sepsis. In November, December 2011 and January 2012, the admission to HDW due to medical disease in obstetric patients accounted for 19%, 32% and 57% of total HDW admissions respectively. In patients with cardiac disease, 55% were delivered via emergency caesarean section, 18% by elective caesarean section and 27% had vaginal delivery. Twenty-seven percent of these patients were admitted to the ICU/CCU for further management. All mothers were discharged home and there were no mortalities in that 3 month period. All were referred to IJN (National Heart Institute) for subsequent care. Thirty-six percent of babies delivered were admitted to the SCN while 64% were discharged to mother. There was one early neonatal death.
Conclusion: The increasing trend of pregnancies complicated by medical conditions, whether pre-existing or newly diagnosed, validates the need for an obstetric physician to be a part of the team of caregivers for pregnant women in Maternity Hospital Kuala Lumpur.
Reference: 1. Nelson Piercy et al. Maternal mortality in the UK and the need for obstetric physicians. 2011.

P1.221
Ovarian vein thrombosis with extensive progression following spontaneous vaginal delivery

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Objectives: Ovarian vein thrombosis (OVT) is a rare, but serious life-threatening condition affecting women usually within the first 10 days of delivery (0.05–0.18% of pregnancies). It is right sided in 80–90% of cases and may be life threatening with progression of thrombus to the inferior vena cava and renal and pulmonary veins. We present a case to highlight this condition describing its unusual presentation, difficulties in diagnosis, investigations and management.
Case: A 25 year-old lady was admitted with acute right-sided pelvic pain and secondary postpartum haemorrhage 14 days following an uncomplicated vaginal delivery. She had three previous uncomplicated vaginal deliveries with no other relevant past medical history. She had a normal BMI, was a non-smoker and no personal or family history of thromboembolism or thrombophilia. Examination revealed an acute abdomen with a palpable mass in the right iliac fossa. She had raised inflammatory markers, but was otherwise apyrexial and haemodynamically stable. Ultrasound revealed a uterus filled with blood clots and an indistinct right adnexal mass. The right ovary could not be clearly identified and adnexal torsion could not be ruled out. An urgent diagnostic laparoscopy revealed a normal postpartum uterus and left tube and ovary. The right ovary and tube were oedematous and congested, with possible ischemia of the distal fallopian tube. The right infundibulopelvic and broad ligaments were thickened and indurated. The bowel and upper abdomen were normal and a systematic lavage of the abdominal cavity was performed. The uterus was evacuated using a size 8 suction cannula. Although the patient was symptomatically better post-operatively, further imaging investigations were performed. MRI initially followed by contrast CT and Duplex Doppler showed an extensive thrombus of the right gonadal vein extending into the infra-renal inferior vena cava (IVC), the right iliac vessels and the left common iliac vein. The renal veins were patent with normal intra-renal flows. The patient was fully anti-coagulated with low-molecular weight heparin and the use of IVC filter was discussed, but not considered necessary. She made good recovery and discharged home on short-term Warfarin therapy.
Conclusion: Ovarian vein thrombosis is often mistaken for appendicitis, pylonephritis or ureteric colic, with patients often managed surgically. A high index of suspicion is essential and prompt diagnosis using contrast based imaging and treatment with short-term anticoagulation is life-saving.

P1.222
The weakest link? An audit of obstetrics and gynaecology handover

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Introduction: Implementation of the European Working Time Directive has meant that doctors are increasingly working in shift patterns. The RCOG advises standardised pro formas to hand over patient information which should be signed by both handing over and taking over teams. This increases the data transferred between shifts thereby reducing the potential for clinical error. We undertook a 5 month retrospective audit on the use of such a pro forma in our Obstetrics and Gynaecology (O&G) department.
Objective: To assess compliance and completeness of the handover process. We identified two standards; firstly patient information should be complete (patient number and date of birth) and secondly it should be signed by the multi-disciplinary team including obstetricians, anaesthetists and the midwife coordinator. The target was 100% for both standards.
Methods: The data was collected from paper copies of the pro formas which includes patient information on a word document with an area for signatures. The data was entered onto a Microsoft Excel spreadsheet and analysed.
Results: Patients were correctly identified in 50% of cases and sixty percent were signed by all members of the team. Overall 43% of handovers were complete (patients correctly identified and signed by the team). The highest number of complete handover documents were in the first month of the audit (74%).
Discussion: Poor or incomplete handovers can delay care and lead to disastrous consequences. Health professionals perceive that clinical problems can be attributed to poor handover and that a set location, a standardised pro forma and handover training are important. Despite few studies specifically looking at handover in O&G departments, it is reported that up to 70% of sentinel events

occurring in hospitals can be attributed to a breakdown in communication. It is therefore vital that O&G handovers optimise communication of critical information as it is an essential component of risk management and patient safety.
Conclusion: We were not successful in meeting the RCOG handover standards. Highest adherence in the first month of pro forma implementation suggests staff awareness may play an important role.
Recommendations and future perspective: Achieving effective handover is the duty of every doctor. It is a skill that needs to be taught and developed. This audit highlights the need for improvement in handover technique and adherence within our department and raises the topical question of whether specific protocols should be implemented within O&G departments.

P1.223
Unusual presentation of spontaneous uterine rupture in the second trimester

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Introduction: Spontaneous uterine rupture during second trimester is a rare occurrence in Obstetrics. We report a case of spontaneous uterine rupture at 24 weeks of gestation presenting with gastrointestinal symptoms.
Case report: A 41 year old G2P0 presented with abdominal pain, vomiting and diarrhoea to A&E at 23 weeks of gestation. She had a past history of missed miscarriage for which she had a surgical evacuation in her first pregnancy. On admission her BP was 73/46, pulse 122/min and temperature was 35 °C. The fetal heart was absent. She was initially resuscitated with colloids and investigations showed haemoglobin 10.0 g/dL with a normal clotting profile. She was transfused with 2 units of blood and taken for emergency laparotomy as she was unstable, with an initial suspicion of abruption placenta. At laparotomy the placenta, sac with the fetus were in the peritoneal cavity and there was 1.5 L of haemoperitoneum. A rent was noticed on the left side of the fundus with intact uterotubal junction. The rent was sutured in two layers. She made a good postoperative recovery. Histology report confirmed features of placenta percreta.
Discussion: Spontaneous uterine rupture during the second trimester is a rare event and the presenting features may be hypovolemic shock with severe abdominal pain. The ultrasound scan may reveal features of an empty uterus with an indistinct defect on the side wall and fetus lying outside covered by a thin membrane. The treatment options available vary from suturing the defect to hysterectomy if needed. There is no robust evidence to quote regarding the recurrence and the pregnancy outcome if subsequently pregnant. High clinical suspicion is needed if a woman presents in shock in any trimester and help from experienced person should be sought as soon as possible to prevent maternal mortality and reduce morbidity.

P1.224
Childbirth complications. a review of stillbirths at Corniche Hospital in 2010 and 2011

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Background: Throughout the world around 2.6 million third trimester stillbirths occur each year, with around 1.2 million babies dying in labour. There is a 2020 vision for the reduction of stillbirths which tasks countries with a current stillbirth rate of more than 5 per thousand births to reduce the rate by at least 50% by the year 2020. Countries with a current stillbirth rate of <5 per thousand births are challenged to eliminate all preventable stillbirths and close equity gaps.
Methods: All pregnancies for which the baby was born without signs of life after 24 completed weeks of pregnancy and delivered in 2010 and 2011 were identified. A retrospective review of each of the case notes was undertaken and the information documented using a modified proforma developed by CEMACH in the UK. Information was collated and analysed using Microsoft word excel and the findings are presented below
Results: A total of 15 294 births took place at the Corniche hospital in 2010 and 2011. Ninety-eight babies were stillborn giving an uncorrected stillbirth rate for the hospital of 6.4/1000 births (98/15 294). The corrected stillbirth rate (excluding lethal malformations) is 5.1/1000 births. 47.9% ($n = 47$) babies were female, 46.9% ($n = 46$) male and 5.1% ($n = 5$) babies had ambiguous genitalia. The ages of the mothers at the time of birth ranged from 18 to 47 with a median age of 30. 43.2% ($n = 42$) women were Emirate, with 28.8% ($n = 28$) of mothers originating from other Arab countries The remaining 27.8% ($n = 27$) of mothers came from non Arab countries. 36.7% ($n = 36$) deaths occurred in consanguous marriages. 41% ($n = 41$) of the mothers had a booking body mass index (BMI) >30. Ninety-eight percent ($n = 96$) of the babies died in the antenatal period, before the onset of labour.
Cause of Death: In 80.4% of the stillbirths ($n = 70$) placental anomalies were mentioned. Multiple congenital anomalies accounted for 18.2% of the stillbirths ($n = 18$). (IUGR) was listed as a cause of death in 7.1%% of the pregnancies ($n = 7$). Thirty-three percent foetuses considered as small for gestation with or without element of IUGR. In 33.6% ($n = 33$) deaths no cause was found. Maternal medical complications was cited in 40.8% ($n = 40$).

P1.225
Management of early pregnancy after bariatric surgery

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Objective: American Society for Metabolic & Bariatric Surgery recommends in women after weight loss surgery to postpone conception to 12–18 months postoperatively to reduce risks for fetus and mother due to rapid weight loss and frequent vitamin and mineral deficiency. There is evidence that pregnancies 18 months or later after bariatric surgery have satisfactory

outcome. We investigated 10 patients who conceived within first 12 months after surgery with focus on their fertility, obstetrical and neonatal outcome.
Methods: We did a retrospective collection of data from medical records and semi-structured telephone calls. We recorded fertility status, type of contraception and intention to conceive, problems during pregnancy, mode of delivery and neonatal outcome. Participants: 10 women who had gastric bypass and conceived 1 week to 11 months after the operation. Height, BMI at conception, age, parity was recorded. One pregnancy was twins.
Results: Eight patients were contacted by telephone: eight patients (100%) did not conceive intentionally, four (50%) did not use any contraceptive method as two were told to be infertile. Two (25%) used condom and two (25%) used contraceptive pill, five patients (62.5%) had diagnosed polycystic ovaries syndrome. In nine patients we noted mode of delivery: three patients (33%) had Caesarian section, one was emergency (placental abruption). Six patients had vaginal delivery. All deliveries were at 38-41 weeks. Newborns weighed 2.3-4 kg and at the time of telephone interview all babies were healthy. Bariatric profile bloods were done every trimester showing anaemia in three patients (30%), zinc deficiency in two patients (20%), B12/folate deficiency in two patients (20%), vitamin D deficiency in three patients (30%)and one patient were showing low levels of vitamin D and zinc despite supplements.
Conclusion: Patients after bariatric surgery show rapidly increasing fertility thus contraception counselling should be given to every woman after bariatric surgery, preferably avoiding contraceptive methods related to digestive system. Pregnancy must be followed up closely from the beginning of pregnancy with bariatric profile bloods every trimester to diagnose promptly any imbalance in vitamins and minerals.

P1.226
Outcome of trial of instrumental delivery in theatre

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Objective: To study the rate of success of instrumental delivery in theatre, rate of sequential instrumental use, rate of third degree perineal tears, cord ph <7.1 and Apgars <7.
Methodology: Retrospective audit for 12 months with sample size of 80 patients.
Results: Fifty-six patients underwent successful trial of instrumental delivery with a success rate of 70% and failure rate of 30%. Rate of sequential instrument use was 20% with successful trial and 29% when the trial failed. There was a 10% incidence of third degree perineal tear. Cord ph was <7.1 in four cases (5%) with Apgars <7 in one case (1.25%). Eighty-six percent of patients were primiparous.
Conclusion: Trial of instrumental delivery is more common in primiparous women than multiparous women. The success rate of instrumental delivery in theatre was 70% with a 10% incidence of third degree perineal tears. Failure is more likely with fetal malposition and failure of descent with traction. There was no difference between vacuum extraction and forceps in terms of success and failure.

P1.227
Previous one caesarean section – what happens next?

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Introduction: Increasing caesarean section (CS) rate is a public health concern. Although a global phenomenon,the timing and rate of increase has differed between countries. Increasing rates of primary CS have led to an increased proportion of an obstetric population who have a history of prior CS. The proportion of women who are not offered or who decline vaginal birth after caesarean (VBAC) is a significant determinant of overall rates of caesarean birth. The CS rate is generally more than 60% for women with at least one previous CS and is increasing. Repeat CS contributes to nearly half of the overall CS rate. Successful VBAC is a means of reducing the CS rate.
Objective: To find out the rate of uptake and success of VBAC, reasons for emergency CS during trials of VBAC in women with one previous CS. To identify ways to reduce the rising rate of caesarean in women with previous one CS. Design: A retrospective audit over a period of 1 year. Settings: A tertiary care maternity unit with 6000 deliveries per annum. Population: All women with one previous CS from August 2008 to August 2009.
Methods: Case notes and electronic patient record (EPR) identified through antenatal booking,taken against delivery suite data. Analysis by Standard MS excel. Main outcome measures: – VBAC uptake rate – reasons for not offering or declining VBAC – vbac success rate – Reasons of emergency CS during VBAC trial – out come of Induction of Labour (IOL): a subgroup analysis. – Comparison of emergency CS, successful VBAC and elective CS groups
Results: Total 235 women with previous one CS. VBAC offered 184 (78%); VBAC accepted 153 (83%); Emergency CS 82 (53%); Successful VBAC 72 (47%). Overall CS rate during the audit period: 28%. CS rate in prev 1 CS was 68%. Indications of emergency CS were mainly presumed fetal compromise 36%, Failure to progress 25%, maternal request 15%, medical disorders 6%, scar tenderness 6%. Sixteen women had IOL, successful VBAC rate 44% with emergency CS of 56% with comparable complication rate.
Conclusions and Recommendations: Establish and support dedicated VBAC clinics; to reduce elective CS for maternal request and emergency CS due to change in mind during labour, by improving counselling and better support and communication; to set a standard gestation for elective CS in women who want to wait for VBAC, unless indicated earlier; to consider IOL and augmentation of labour in appropriately selected women.

P1.228

Retrospective analysis of amniocentesis in Universiti Kebangsaan Malaysia Medical Centre (UKMMC)

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Objective: The aim of this study was to evaluate the indications, karyotype results, complications and outcome of amniocentesis that had been performed in Fetomaternal unit Universiti Kebangsaan Malaysia Medical Centre (UKMMC).
Methods: We retrospectively reviewed the case notes and results of 64 amniocentesis cases that were performed in the fetomaternal unit between January 2007 to May 2010 for different indications. The success of cell culture and neonatal outcome were also evaluated. The amniocentesis was performed between 15 and 39 week of gestational age with free hand technique by 22 G spinal needle and 10 mL of amniotic fluid was taken.
Results: There was no procedural complication and the tissue cell cultures were successful in all cases. The amniocentesis indications were: multiple fetal anomalies detected by obstetric ultrasonography in 44 (68.8%), high risk in NT screening test 10 (15.6%), high risk in triple screening test 3 (4.7%), advanced maternal age (≥35 years) in 1 (1.6%) and other indications in three cases (4.7%). Abnormal karyotypes were detected in 17 of 64 cases (26.6%): three trisomy 13 (1%), nine trisomy 18 (14.1%), three trisomy 21 (4.7%), and two structural chromosomal anomalies (3.2%). Two thirds of the fetuses with abnormal karyotype were males in trisomy 18 and 13 while the trisomy 21 were all males. All of them were noted to have multiple fetal anomalies on ultrasound. There were 29 cases of fetal anomalies which showed normal karyotype. Anomalies that required surgical correction post delivery for this group include abdominal wall defect, cleft lip and congenital heart disease.
Conclusion: Although the size of this study is small, amniocentesis is found to be a safe and reliable method for chromosomal analysis and an important adjunct to facilitate management of fetal anomalies detected on ultrasound scan.

P1.229

Management pathway of pregnant women who perceived decreased fetal movement in low risk population

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Background: A perception of decreased fetal movements (DFM) was first recognised in 1973 as a non-specific early warning sign of fetal distress or suboptimal intrauterine conditions. However, The National Institute for Clinical Excellence (NICE) 2008 guidelines stated that formal fetal movement counting and ultrasonography should not form part of routine antenatal care in the UK. Various studies have reported associations between DFM and low birthweight, oligohydramnios, preterm birth, placental insufficiency, induction of labour, emergency caesarean section and stillbirth. Fetal growth restriction is a significant factor contributing to the increased risk in these pregnancies. Until recently there is no national guideline on the management of these women.
Objective: To evaluate the current investigations and our local guideline, in management of women with DFM in low risk population. Outcome Measures: Fetal growth restriction, mode of delivery, birthweight, admission to neonatal intensive care unit and fetal demise.
Methods: This was a prospective study of 160 low risk pregnant women, above 28 weeks of gestation, who presented to antenatal day assessment unit, with a history of decreased fetal movement alone, between April 2010 to May 2011. Pre-study management pathway includes; Blood pressure check, urinalysis for proteinuria and cardiotocography (CTG) for all women; ultrasonography (USS) was indicated if symphyseal fundal height is suggestive of small for gestational age or recurrent presentation of DFM; and induction of labour (IOL) was considered after 38 weeks for recurrent presentations. Patient's information was entered into a data base.
Results: Sixty women (38%) underwent ultrasonography for fetal biometry, amniotic fluid volume, fetal morphology plus or minus umbilical artery Doppler (UAD) assessment, while 62% (100) had CTG alone. Ultrasound detected small for gestation age and oligohydramnios in 6.6% (4) and 25% (15) respectively. The UAD was performed in 27% (16), of which abnormality was detected in (5). CTG tracing was suspicious necessitating IOL or emergency delivery in 5% (8). IOL was considered after 38 weeks in 35% (56), preterm delivery was 14% (22), and the caesarean section rate was 17% (28). Birthweight <10% was 13% (21) and admission to NICU was 6% (10). Two (1.2%) cases of still birth were diagnosed at 33–34 weeks during the study.
Conclusion: This study suggests that antenatal ultrasonography is helpful to identify fetuses at risk of FGR and fetal demise. Management pathway has now been developed following this study in our unit.

P1.230

Impact of vagina birth after caesarean section (VBAC) clinic on delivery outcome of women with previous caesarean section: our experiences in a university hospital

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Background: Vaginal birth after caesarean section (VBAC) is considered as an option for all women who present for antenatal care with a history of previous caesarean birth. Appropriate counselling in VBAC clinic by dedicated senior midwife is essential to increase acceptance rate. Counselling should include review of previous obstetric history and indication for previous caesarean section (CS), likelihood of successful vaginal birth, and discussion of risks and benefits of VBAC versus repeat CS. The

success rate of VBAC is up to 72–76%, which is increased to 80–90% in women with previous vagina birth. The National Sentinel Caesarean Section audit report found the VBAC rate in England and Wales was 33% in 2004.
Objective: To review the effect of VBAC clinic on the care pathway of women undergoing planned vaginal birth after caesarean section.
Methods: This was a retrospective and prospective cohort data analysis of all women who had planned VBAC delivery. A total of 99 women had attempted VBAC from January 2007 to December 2007 before VBAC clinic was introduced. A total of 357 women attempted VBAC from July 2010 and September 2011 after the introduction of VBAC clinic. Patient's characteristics, such as socio-demography, indication for previous caesarean section, patient counselling in the VBAC clinic, provision of information leaflet and mode of delivery were entered to a data base. A student *t*-test was used to determine if there is any statistically significant difference between the two proportions.
Result: In the retrospective arm of the study, 360 women were counselled by the consultant team. The acceptance rate was 42%, and 52% had successful VBAC delivery in 2007. A total of 480 women, in the prospective arm, attended VBAC clinic at 25 weeks with the acceptance rate of 69% (329). Of 357 women who underwent VBAC, 64% (229) had successful VBAC. One hundred and twenty-three women had ELCS (26%) due to obstetrics indication or maternal request at 39 weeks. The difference between the two groups was not statistically significant (*P*-value < 0.432), however, there was an increase in vagina birth after VBAC clinic was started.
Conclusion: Our result shows that the introduction of VBAC clinic in 2008 resulted in an increase, in both the acceptance rate and successive VBAC delivery, with no significant maternal and neonatal poor outcome.

P1.231
Antenatal risk assessment strategies to predict adverse perinatal outcome

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Objective: To detect patterns and the common underlying factors in the series of stillbirths for our local population. To assess the efficacy of antenatal risk assessment strategies in the prediction of adverse perinatal outcome.
Methods: All stillbirth reviews between January 2010 and January 2011 were examined, and 36 cases were analysed. Data was retrieved from case notes, case review forms, hand held notes and laboratory investigations.
Results: Of the 36 cases evaluated, 72% of women had never smoked, and 92% had never used recreational drugs. Sixty-one percent of these women had a BMI <30% and 28% were in a consanguineous relationship. Five of the 36 babies had congenital malformations and 45% had some degree of foetal growth restriction. Twelve out of 14 cases of foetal growth restriction were not detected by SFH measurement on customised growth charts. 16/36 ladies had been classed as 'low risk' on booking visit.
Conclusions: The results throw into sharp relief the lack of specificity of current risk detection strategies, routine antenatal surveillance and highlights gaps in knowledge regarding stillbirth. It also emphasises the need to develop specific evidence based strategies to identify those mothers most at risk of adverse perinatal outcome.

P1.232
Are we asking the right questions to screen for perinatal mental health?

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Objective: In recent years, factors around maternal mental health have been a public health priority due to the impact on the maternal-child relationship and the increasing incidence of maternal deaths following post-natal depression (PND). The Confidential Enquiry into Maternal Deaths (CEMD) recently highlighted the difficulty in identifying women at risk of developing mental health problems antenatally and recommended the use of early screening tools with the goal of early intervention in compliance with National Institute for Health and Clinical Excellence (NICE) guidelines. Traditionally, the Edinburgh Depression Scale (EDS) has been used, but its full potential is hindered by the requirement of training prior to utilisation and the extensive 10 questions which takes up valuable time in a busy hospital setting. The aim of this study was to utilise a novel, previous validated two question screening tool; 'Whooley' questions, in order to assess and identify the risk of pregnant women developing mental health problems within the obstetric wards of an East London Trust hospital.
Methods: 'Whooley' patient questionnaires were made available to all clinical staff from July 2011. Retrospectively, we identified a random sample of patients who presented to our triage department or obstetric wards over a 2 week period. Hospital notes were then reviewed to assess whether the 'Whooley' questions were being asked, and the relevant patient responses were then analysed.
Results: One hundred and twenty-one patients were identified who were either antenatal or postnatal. Eighty-nine percent of these patients were assessed fully using the 'Whooley' screening tool. Twenty percent of those who were screened were re-screened in their second trimester, and 10% were re-screened for all three trimesters. The 'Whooley' questions revealed that 12% of our sample cohort had suffered from past mental health problems, and that 5% of women were at high risk of depression during their current pregnancy, the majority of which were thought to be mild to severe depression with associated suicide attempts.
Conclusion: The vast majority of health care staff appeared to appreciate the importance of screening pregnant women at risk of depression due to the high rate of questionnaire completion. Whilst the 'Whooley' screening tool does manage to successfully identify those at high risk of developing depression, it does not provide guidance for management strategies or focussed target referral timelines to mental health services. Re-auditing can be

done in the future with these drawbacks in mind in order to improve patient related outcomes.

P1.233
Relation between maternity anxiety during pregnancy and postpartum depression

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Introduction: Depression disorders and anxiety are the most common diseases which can have a lot of consequences for mother and child . With identifying the factors which inclined women to accept depression postpartum could determine the factors which are exposed to danger. The goal of this study is to determine the relation between maternity anxiety during pregnancy and postpartum depression in women who go to hospital centers which in done in Shahid Beheshti University in 2009.
Methods: In this foresighted study 200 pregnant women who are in 38–40 weeks of gestation and went to three hospital that are Mahdieh, Taleghani and Shohola in Tehran which had research features and participation consensus in this research are selected with available sampling and the demographic characteristics and midwifery form, depression questionnaire of Beck and anxiety questionnaire of spill Berger (to reject depression) are completed. In sampling stages, women with depression during pregnancy were removed from study. Finally, the discussion and investigation of this research are done with 200 persons. In the second stage, follow up for 4–6 weeks postpartum are completed by depression questionnaire of Edinburgh in order to determine the extent of depression for samples.
Results: There is a significant relation between maternity anxiety and depression postpartum and estimation of relative risk was $P < 0.0001$ and RR = 4/5.
Discussion: According to the results of study, it is recommended that to identify the mothers who have maternity anxiety in order to recognizing the ladies who are exposed depression and providing care in first stages of disorders must be examined carefully.

P1.234
The role of probiotics in infant diseases

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Objective: Probiotics are the live and certain microorganism which will have some useful effects on the health of host by effect on the bacteria flora if it uses in human or animal. Neonatal gastrointestinal system is sterile on birth time, but bacterial colonisation developed rapidly. It seems that gestational age, labour type and nutritional diet have significant effects on this process. It is believed that regulation abnormalities in intestinal mucosal defense structure in early life, is a risk factor for many chronic disorders such as: atopic diseases (asthma, dermatitis and allergic rhinitis) and autoimmune diseases (multiple sclerosis, type I diabetes and chronic inflammatory disease).
Results: The results of studies show that adding natural or artificial materials containing probiotics to diet of neonates with watery acute diarrhea, antibiotic-induced diarrhea, atopic dermatitis, functional chronic abdominal pain, constipation and necrotizing enterocolitis had some desirable results. Also, probiotic effects on infants' growth and prevention of ear pain is established. The rate of developing common cold and other infectious and respiratory diseases is also decreased using probiotics.
Conclusion: According to these studies, it seems that probiotics can be useful in treatment of but more research and studies are essential.

P1.235
Women's knowledge and perceptions of the risks of excess weight in pregnancy

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Objective: To describe pregnant women's knowledge and perceptions of the risks of excess weight in pregnancy.
Methods: A cross-sectional survey of 411 pregnant women attending a nuchal translucency scan at 11–13 + 6 weeks of gestation in community radiology units in Christchurch. Women completed a questionnaire to establish basic demographics. The main outcome measure was knowledge regarding the risks of excess weight in pregnancy. Knowledge related to the risks of smoking in pregnancy was also considered as a comparison. A literature search was conducted to establish known rates of nine complications related to smoking and/or excess weight in pregnancy (stillbirth, small for gestational age (SGA), macrosomia, complicated vaginal delivery, structural anomaly, caesarean section, blood pressure anomalies, gestational diabetes (GDM) and shoulder dystocia). Using this information, a panel of obstetricians identified the answers they considered correct for each question. Descriptive statistics were calculated with the support of a biostatistician.
Results: Participants' age ranged from 17 to 50 (mean 31). Fifty percent of women were nulliparous, 53% of women had a university qualification. Ethnicities were 75% New Zealand European, 5% Asian, 4.5% Maori and 15.5% 'other'. Calculated BMI of participants was: 1% ($n = 6$) underweight, 49% (200) normal weight, 27% (112) overweight and 17% (70) obese. Fourteen percent of women correctly identified complications related to excess weight in pregnancy compared to 21% of women who correctly identified risks for smoking. Stillbirth was identified as a risk factor associated with excess weight by only 26% (107) of women, SGA by 14% (59), macrosomia by 10% (42), complicated vaginal delivery by 45% (184), structural anomaly by 14% (58), caesarean section delivery by 32% (133), blood pressure anomaly by 36% (147), GDM by 49% (200), and shoulder dystocia by 27%

(109). BMI appeared to have little effect on women's knowledge and perceptions of risk.
Conclusion: Women's knowledge of the increased risk of complications of pregnancy associated with excess weight is limited. Many women correctly identify that excess weight increases the risk of complications of pregnancy and delivery but the majority were unaware of the increased risk of congenital anomaly which may be reduced by treatment of 5 mg of folic acid preconceptually. Further education is required as obesity is becoming more prevalent within our obstetric practice, impacting on service provision.
This study was funded by the University of Otago as part of a Masters in Health Sciences.

P1.236
External cephalic version: success rates over a 6 year period in a London district General Hospital
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Objective: External cephalic version (ECV) is advocated to offer pregnant women with a breech presentation at term an opportunity to have a safe vaginal delivery. The success rates of ECV have been variously reported between 30% and 80%. An overall success rate of 40% for nulliparous and 60% for multiparous women are accepted as standard by the Royal College of Obstetricians and Gynaecologists (RCOG). We sought to assess the success rate of ECV in our hospital over a 6 year period.
Methods: All ECV performed on women who delivered between 1 January 2006 and 31 December 2011 were identified using hospital admission coding for ECV. The demographics, pregnancy and labour details of these women were collected from Euroking electronic maternity records.
Results: Ninety-three ECV were performed in the 6 year period. A total of 90 cases were analysed after excluding a woman with insufficient data, a woman who had ECV for 2nd twin and the 2nd record for a woman having her 2nd ECV. Of the 35 nullips, 13 (37%) had a successful ECV. In contrast, 26 of 55 multips (47%) had a successful ECV including one woman after a 2nd attempt. Overall success rate for our unit was 43% (SD ± 12%). Of the women who had a successful ECV, the mean maternal age at delivery was 31 years old, BMI 24.7, parity 1, gestational age at booking was 14.6 weeks and at ECV was 38.3 weeks. In this group, 54% of infants were female, the mean birthweight was 3.398 g, head circumference 35 cm, length 52 cm. These findings were not statistically different from the women who had unsuccessful ECV. Women who had a successful ECV however had a significantly later mean gestational age at delivery of 40.3 weeks compared to 39.3 weeks, and were more likely to have meconium in labour.
Conclusions: The ECV success rate in our unit is comparable with those reported in the literature. There were no specific risk factors identified to differentiate between women who had successful and unsuccessful ECV.

P1.237
Cost effectiveness of external cephalic version
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Objective: External cephalic version (ECV) is advocated to reduce the incidence of breech presentation at delivery in order to minimise the need for lower segment caesarean section (LSCS). Although ECV has a very low complication rate, it can be painful and has potential complications including placenta abruption, uterine rupture and fetomaternal haemorrhage. Furthermore, despite ECV, three in four breeches will still require LSCS. We evaluated the cost effectiveness of ECV in our unit.
Methods: Based on our multi-centred studies of ECV performed in the 6 year period 2006–2011, we have reported a success rate of about 33.2% with a number needed to treat (NNT) to achieve a vaginal delivery of 4.2. The methodology has been described in our abstracts AO622 and AO725. Using the data set from Ealing Hospital only, we identified the length of stay (LoS) for ECV, and postnatally for vaginal delivery, elective and emergency LSCS.
Results: Ninety-three ECV's were performed in the 6 year period. A total of 90 cases were analysed after excluding a woman with insufficient data, a woman who had ECV for 2nd twin, and the 2nd record for a woman having her 2nd ECV. The average duration for ECV admission was 1.3 ± 0.9 (range: 1–6) days. The postnatal length of stay (LoS) for vaginal birth, elective and emergency LSCS were 2.5 ± 0.7, 3.8 ± 0.8, 4.6 ± 0.7 days respectively. The additional cost of managing a breech pregnancy without ECV would be an elective LSCS of £2800 and a 3.8 day postnatal LoS of £1140 giving a total cost of £3940. The additional cost of managing a breech pregnancy with ECV would be an ECV of £279 and a 1.3 day LoS of £390 giving a total cost of £669. 45.6% of the women had elective LSCS costing £114 912, 30.0% had emergency LSCS costing £104 949 and 24.4% had vaginal delivery costing £50 200.56. The average cost of delivery is £3000.68. Proportionately the average postnatal LoS is 3.6 days costing £1080. This gives an average total cost of £4749.68 for managing breech pregnancies with ECV with a net difference of £809.68 compared to those without ECV.
Conclusions: From our study, the cost of delivering a breech pregnancy in our unit is higher following ECV than for those who decline the procedure. ECV would be more cost effective if done either as an outpatient or day case procedure where the LoS is <1 day.

P1.238
Improving patient safety and acheiving CQUIN target
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Objective: Venous thromboembolism (VTE) is the leading cause of maternal morbidity and mortality within the UK. Identifying the key risk factors and their relative severity is crucial to pertinent management strategies. Assessment of these risk factors

can be exhaustive, and lack of standardised access to this dataset can prohibit early intervention and disease prevention. In order to reduce maternal deaths, the Commissioning for Quality and Innovation Framework (CQUIN) set in place by the National Institute for Health and Clinical Excellence (NICE), recently recommended that the NHS in England introduce a national risk assessment tool to reduce maternal deaths. The aim of this study was to identify and assess the risk of pregnant women developing PTE in a busy obstetric department that delivers 6000 babies per year, and to evaluate whether hospital guidelines were being followed in accordance with RCOG guidelines.

Methods: A standardised proforma using RAG (red, amber green) rating was created to assess all women who were booked for their pregnancy under our care. Retrospectively over a four month period, we identified a sample cohort of patients who were assumed to be assessed with these proformas. Completion of the proformas were then analysed to ensure correct identification of risk factors and correlation between suggested and initiated management plans. Following this, the proformas were re-audited 6 months later.

Results: Fifty patients were randomly identified who were either antenatal or postnatal. Eighty-five percent of proformas were found to be completed for the antenatal group compared with the 63% completed for the postnatal. We found that 60% of patients in both groups were identified as having the correct risk factors being recorded on our proformas. Six percent of patients did not have any risks assessed. Weight recording for drug dosage calculation was recorded for 44% of the patients. After the 6 month interval, the re-audit showed that 99% of the proformas were completed for antenatal women, which contributed to successfully achieving overall CQUIN hospital trust target of 90%.

Conclusions: The importance of the proforma was thought to be recognised given the high completion rate in the antenatal group, particularly after the re-audit period. More work is needed to ensure that healthcare staff are able to identify risk factors correctly and accurately. Furthermore, weight recordings for the patient group was poor, which may potentially lead to inaccurate management plans if not corrected in the future.

P1.239
Successful full term pregnancy in a woman with didelphys uterus – case report

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Mullerian tract anamolies result from failure to complete bilateral duct elongation, fusion, canalization, or septal resorption of the mullerian ducts ranging from a complete duplication of the uterus, cervix, and vaginal canal. They may occur in any step during the development process. Instead each one develops a separate cavity. This condition is called double uterus (uterus didelphys) Each cavity has got its own cervix and sometimes also have a duplicate or double vagina. Uterus didelphys is a rare anamoly occurring in 0.1%0.5% of healthy fertile population and sometimes not even diagnosed. The condition is associated with kidney abnormalities, and many women with double uterus have normal sex lives, pregnancies and deliveries. In fact the more complete the duplication, the less likely complications are to arise. Uterine malformations have clinical importance because of the many obstetrical complications that can take place in a pregnant uterus. According to them pregnancies in a functional hemi-uterus originating from a single Mullerian duct (unicornuate unicollis, one horn of the uterus didelphys) have a better prognosis with regard to the fetal wastage rate than a pregnancy in a uterus bicornuate, arcuate,or septate. Though the delivery of a term infant and very rarely twins, is possible in a patient with uterus didelphys the usual history is one of miscarriage, or preterm labour. Patients with uterus didelphys belong to a high risk group and deserve a particular prenatal care. Therefore it is of a great importance for the clinical management of these cases that abnormalities of the reproductive tract are detected in a early stage. In the study of uterine anamolies, ultrasound is used which is as reliable as laparoscopy or hysterosalpingography. The etiologies of these disorders are still widely unknown. During the follow-up period endometriosis was observed in (16%). On the basis of this finding it can be concluded that fertility in women with didelphic uterus is not notably impaired. The prognosis of pregnancy is comparatively good while preterm labour and fetal growth retardation indicate meticulous prenatal care. Long term follow up did not reveal that didelphic uterus is associated with increased frequency of endometriosis or genital neoplasm. Interestingly, in our present case report, this woman had single pregnancy in her right uterus and gave birth to a baby by caesarean section which corroborates with the findings of studies.

P1.240
Alagille syndrome – a case report and review of literature

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Case Report: A 23-year old para 1 was 12 weeks and 3 days pregnant into her second pregnancy when she underwent chorionic villous sampling (CVS). The father of the unborn child was affected by mild form of Alagille syndrome. This pregnancy was conceived with a new partner. He has facial features of Alagille syndrome which includes a broad prominent forehead, deep-set eyes, and a small pointed chin. He is otherwise has no other symptoms. The results of the CVS showed that the fetus was affected by Alagille syndrome and she had a medical termination of pregnancy at 13 weeks of gestation. The procedure was uneventful.

Discussion: Alagille syndrome is a genetic disorder that affects the liver, heart, kidney, and other systems of the body. Problems associated with the disorder generally become evident in infancy or early childhood. The disorder is inherited in an autosomal dominant pattern, and the estimated prevalence of Alagille syndrome is one in every 100 000 live births. The severity of the disorder can vary, with symptoms ranging from mild to severe heart and/or liver disease requiring transplantation. Unfortunately it is not possible to predict the severity of the affected individual in utero. Signs and symptoms arising from liver damage in Alagille syndrome may include jaundice, itching, and xanthomas.

A liver biopsy may indicate bile duct paucity. Other signs include congenital heart problems, particularly Tetralogy of Fallot, and an unusual butterfly shape of the bones of the spinal column. Many people with Alagille syndrome have similar facial features, including a broad, prominent forehead, deep-set eyes, and a small pointed chin. The kidneys and central nervous system may also be affected. There is no known cure for Alagille Syndrome. Most of the treatments available are aimed at improving the functioning of the heart, and reducing the effects of impaired liver function. The prognosis for people with Alagille syndrome depends on the severity of liver damage and heart problems and the early treatment of malabsorption. Fifteen percent of people with Alagille syndrome will eventually require a liver transplant. Research studies report that 75% of children diagnosed with Alagille syndrome live to at least 20 years of age. Because of improvements in liver and heart therapies, this survival rate is increasing. Many adults with Alagille syndrome who improve with treatment lead normal lives. Deaths in people with Alagille syndrome are most often caused by liver failure, heart.

P1.241
Volvulus in utero

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Case Presentation: Thirty-eight years old, primigravida, presented at 32 week in labour. No antenatal complications detected. Baby delivered by emergency caesarean section for fetal distress. Baby diagnosed post mortem with volvulus.

P1.242
Monitoring of glycosylated haemoglobin in pregnancy – a UK survey

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Introduction: Hba1c values are used in the non pregnant diabetic population to monitor average blood glucose levels over a 23 month period. Standardised reference values have been researched and established for the non pregnant diabetic population but do these reference values change in pregnancy and for each trimester? Is home blood glucose monitoring a more reliable indicator than Hba1c? In our own practice there appeared to be a continuing overuse of Hba1c testing in pregnancy. A literature review has shown that Hba1c is not a reliable test in gestational diabetes. Therefore a questionnaire was sent with the aim of establishing practice in the UK with regard to frequency of Hba1c testing in pregnancy.
Methods: A questionnaire was sent both electronically and by post nationally across the UK. Identification of various maternity units were made through Birth Choice UK. One hundred questionnaires were sent with a 50% response rate.
Results: Of the respondents there were 30 gestational diabetes, 10 Type 1 Diabetes and 11 Type 2 diabetes. When asked whether they would carry out Hba1c testing for gestational diabetes, only 11% would not. Forty-three percent would carry out monthly testing whereas 46% would carry 2–3 monthly testing. With regard to type 1 Diabetes in pregnancy, 80% would perform monthly testing while the rest would carry out testing every 2–3 months. In Type 2 Diabetes 50% would carry out monthly testing while 40% would carry out testing 2–3 monthly and in 10% testing was opportunistic. When asked whether they would recommend only self glucose monitoring in pregnancy more than 50% would not consider this alone without Hba1c. Hba1c testing was independent of the trimesters in pregnancy.
Conclusion: The above results indicate varied practice in the UK. Although the half life of the erythrocyte is 50–55 days, NICE has recommended monthly testing prepregnancy. This recommendation seems to be extrapolated into pregnancy itself. The NICE guidance on Hba1c testing in pregnancy is not clear which could also account for inconsistent practice. Although Hba1c testing is not useful in gestational diabetes, the majority of units continue with this practice. More robust evidence is needed to set reference Hba1c values in the different trimesters in pregnancy. Based on the above results we propose to carry out a prospective study into the relevance and frequency of Hba1c testing in pregnancy.

P1.243
Iron, folic acid supplements during pregnancy make kids smarter and reduce cancer

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Introduction: The importance of maintaining high intake levels of folic acid during pregnancy has been established by numerous scientific studies, all of which verify that the vitamin directly affects the fetus' nerve system, Besides helping to prevent birth defects, folate is known to make and help replicate DNA, as well as aid in the production of new blood cells. And now this study identifies some other effect of this vitamin.
Methods: This is a systematic review article in which was used up to date references and reviewed 40 articles and books.
Results: Some new studies showed a 64% reduction in colon cancer rates among children whose mothers supplemented with folic acid during pregnancy. One reason, it actually increases the stability of the DNA and this might be one of the mechanisms of how folic acid in utero may protect against cancer. In another article, the researchers found that children whose mothers had received supplements (iron and folic acid) scored higher on tests of intelligence, organisation executive function, and fine motor skills than children of mothers who had not received supplements.
Conclusion: Folic acid supplementation during pregnancy aids in producing children with improved brain development and better motor skills and helps to prevent and treat cancer in general.

P1.244
Maternal request elective caesarean section audit

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Objective: To audit our practice and benchmark against the newly published NICE guidelines.
Methods: Retrospective notes review. From May to September 2011. Parameters: maternal request with or without previous caesarean section (CS) and previous CS. We auditted the following: (i) whether reasons for maternal request have been explored, discussed and recorded. (ii) Whether a consultant obstetrician has been involved in the decision making process. (iii) Gestational age at which elective CS was performed. (iv) Any complications post CS. (v) average of hospital stay.
Results: One hundred and thirty-three cases identified. Sixty-eight were excluded either due to more than 1 previous CS (42) or clinical indication (17) or no notes (9). Sixty-five case notes were reviewed. Indications for maternal request CS: previous 1 CS(56). maternal anxiety (9). Documentation of risks & benefits of VBAC incl. unplanned CS & El CS: Risks discussed (22/65) Actual risks documented (4/65) Leaflet (11/65) Referred for counselling (13/65) 47/65 saw a consultant as part of the decision-making process Timing of planned CS: 1/3 before 39/40 Average stay: Average = 2.13 days
Conclusion: (i) Documentation of patient wishes and discussion of advantages and disadvatages of possible methodes of delievery need improvement and development of aids towards this (leaflets/stamps)is required. (ii) Timing of Elective CS: 1/3 before 39/40. To aim for on or after 39 weeks as per NICE guidelines (iii) Trends: opt out of VBAC late on Maternal preferences & priorities should be taken into account. Discussion and documentation of risks and benefits of planned CS, vaginal birth and unplanned CS. Discussion of likely success rates, taking previous obstetric history into account. If anxieties regarding birth: refer to specialist in perinatal mental health. Offer planned CS if after discussion and offer of support vaginal birth still not acceptable. Actions: Today: (i) Set up pathways for VBAC and maternal request elective CS. (ii) Identify volunteers for patient education about VBAC versus elective CS and EM CS (iii) Book El CS after 39/40 (iv) Educate staff about pathways (v) Identify areas needing investment. Tomorrow (i) Evaluate our data management/Eclipse (ii) Develop documentation aids (iii) Look at data regarding 2 + CS and represent at departmental meeting (iv) Further dissemination of information and changes: education & understanding of why (v) Reaudit again in 12 months time to see whether the recommendations have been followed.

P1.245
Study on risk factors for cervical carcinoma at Central Womens Hospital, Yangon, Myanmar

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The aim was to identify the risk factors for the development of carcinoma cervix in women. It is a hospital based case control study carried out among the women who were admitted to the gynaecological ward at Central Women's Hospital, Yangon, Myanmar from September 2010 through to May, 2011. There were 35 patients with carcinoma cervix as the study group and same number of age matched patients with any other gynaecological diseases as control. In this study, mean age of the study group was 51.4 ± 10.5 years and mean age of the control group was 50.3 ± 9.2 years. Carcinoma cervix was found to be more common in women with lower educational status in this study ($P = 0.013$) (OR – 3.57; 95% CI = 1.14–11.48). There was no statistically significant association between the carcinoma cervix and number of sexual partners ($P = 0.356$), parity ($P = 0.314$) (OR = 0.60; CI = 0.20–1.82), and smoking ($P = 1.0$) in this study. It was also found that carcinoma cervix was significantly associated with a previous history of sexually transmitted disease or warts ($P = 0.001$). There was a significant association between oral contraceptive pills usage and carcinoma cervix ($P = 0.05$) (OR = 2.5; 95% CI = 1.43–143.21). Mean age at first coitus in carcinoma cervix cases was 20.6 ± 3.9 years and that in control group was 24.2 ± 10.6 years ($P = 0.04$). Moreover, carcinoma cervix was found to be less common in woman whose husband had a history of circumcision ($P = 0.025$) (OR = 0.00–0.86). Taking pap smear within 3 years significantly reduced the risk of carcinoma cervix ($P = 0.000$) (OR = 98.22; 95% CI = 11.19–2221.7).
In conclusion, lower education status, usage of oral contraceptive pills, younger age at first coitus and failure to have pap smear were found to be high risk factors in carcinoma cervix in this study. Therefore it is suggested to implement medical education on healthy sexual life, screening tests to detect pre-cancerous lesions and immunization against high-risk HPV (16 and 18) to reduce the prevalence of cervical carcinoma.

P1.246
Uterine rupture – increased vigilance required

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Background: Uterine rupture is an uncommon but potentially catastrophic obstetric emergency. The incidence of scar rupture following VBAC is 9/1000 compared with 0.18/1000 with no previous caesarean section. We present two cases of uterine rupture that we managed in our department with positive outcomes.
Method: Review of two cases of uterine ruptures presented to Whipps Cross University Hospital, London in September 2011.

Results: Case 1: A 27 year old, para 2, African housewife who had two previous emergency LSCS for pre-eclampsia at 38 and 34 weeks was booked to have an elective LSCS at 39 weeks. Her pregnancy was uncomplicated until presentation to maternity triage at 32 + 2 weeks gestation with sudden onset of severe continuous abdominal pain, heavy fresh vaginal bleeding and a rigid abdomen. She was diagnosed with possible placental abruption and was taken to theatre immediately for an emergency LSCS. On entering the peritoneal cavity, the sac along with the fetus and placenta had been extruded from the scar. A female infant weighing 900 g was delivered in poor condition with Apgar scores of 01,55,510. She was intubated and was transferred to SCBU.

Case 2: A 28 year old, para 4, caucasian with 2 previous vaginal deliveries and a previous elective LSCS for twins had multiple visits with abdominal pain but was discharged as no concerns were found. She was initially booked for elective LSCS but opted to have a vaginal delivery. She presented at 40 + 2 weeks with reduced fetal movements and labour was induced. She had continuous CTG monitoring and was noted to have early decelerations. Twelve hours after induction the CTG showed a fetal bradycardia and blood stained liquor was noted. A grade 1 LSCS was performed. On incision of the peritoneum, the fetal shoulder was protruding through a 3 cm gap in the uterus. A live male infant weighing 2956 g was delivered and was resuscitated successfully. Mother and baby were discharged 5 days post-delivery.

Conclusions: Learning points from these case reviews are that uterine rupture may present most unexpectedly but clinicians must always be vigilant. Although VBAC is now widely encouraged, the significant increase in the potential risk of uterine rupture should be made clear. Induction of labour in patients with scarred uterus should be carried out with caution and close monitoring for early identification and prompt management of uterine rupture in order to prevent adverse maternal and fetal outcomes.

P1.247
Brachial plexus injury without shoulder dystocia or physician traction: a case presentaion and review of the literarture

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Brachial Plexus injury is one the most common fetal complication of shoulder dystocia complicating 416% of such deleiveries . In the UK the incidence of brachial plexus injury is quoted as 1/2300 deliveries and such injuries are independant of operator experience. Only 10% results in permanant shoulder dusfuction. Significant body of evidence is that maternal propuslive forces may contribute to some of these injuries. Substantial minority of cases of Brachial Plexus injuries are not associated with shoulder dystocia. One series reported 4% of injuries occured after uncomplicated ceasarean section. Germantal reported 50% of all cases of Brachial Plexus plasy may attribute to unavailable intrapartum or antepartum events and not excessive traction of torsion of fetal head. Similar reports have been published by Penal and Gmovesky. Multiple reports of of brachial plexus inujries were found which appear to have occured sufficiently prior to delivery.

We present a case G5P2 + 2. The patient was full trem presented to the emergency room of the hospital with labour pains. She was examined and found to be in active labour. The patient was admitted directly to the labour ward. On arrival she was found to be contracting and shifted to the delivery room. She had spontenous vaginal delivery with no fundal pressure or manipulation by the attending doctor. The patient deliverd an alive female baby weighing 3.4 kg. The patient never complained of any pressure/maneuvers applied by the doctor. Similar observation were confirmed in the delivery notes and the nursing notes in the delivery room.

Soon after the delivery the attending nurse observed restricted right shoulder movements and informed the Neonatologist.

Thus it is clear from this case and as reported in the literature that there are many cases of brachial plexus injuroies with-out shoulder dystocia or excessive force/traction being applied by the accoucher. Maternal propulsive theory of Sandmire and Dermott could be an alternative explanation for the brachial plexus injury. The automatic assignment of responsibility for brachial plexus injuries to an obstetrician or midwife is inappropriate' and not supported by the literature.

P1.248
Malaysia's progress in achieving Millennium Development Goal (MDG) 5

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Introduction: The MDG 5 deals with the reproductive health status of women for reduction in maternal mortality ratio (MMR) by 75% and provide universal access to reproductive services by 2015. In the 1970s, Malaysia faced several difficulties to overcome in the form of ethnic and geographical inequalities and accessibility to health and educational services. These challenges have been met through synergistic policies, strategies and programmes.

Setting: Malaysia.

Methods: The Ministry of Health, Malaysia introduced the Confidential Enquiries into Maternal Deaths (CEMD) set up in 1991. The proportion of births attended by skilled health care personnel (an accredited midwife, doctor or nurse) trained in skills is monitored. In terms of universal access to reproductive health, various measures contributing to the health and well-being of mothers through prevention, implementation and surveillance of various targets and indicators are undertaken.

Results: The MMR was 44 per 100 000 live births at the inception of CEMD in 1991, and the rate declined to 28.1 in 2000 and subsequently plateaued at 27.3 in 2008. Further reduction of maternal mortality became a challenge because of indirect causes that require specialized skills, multidisciplinary case management and prevention of pregnancies in high-risk mothers. High MMR is noted among the indigenous (orang asli) and undocumented immigrants in Sabah. The proportion of births attended by skilled

health personnel has been increasing from 1990, and since 2004, has been consistently above 95%. Safe deliveries in all states increased from 74.2% in 1990 to 97.6% in 2008. The contraceptive prevalence rate doubled from 26.3% in 1974 to 52% in 1984, staying at 50% thereafter. Steps are taken in training of health-care providers and introducing effective family planning among high-risk mothers. The adolescent (15–19 years) birth rates declined from 28 births per 1000 adolescents in 1991 to 13 in 2007. The antenatal first-visit coverage increased from 78% in 1990 to 94.4% in 2007. The average number of antenatal visits was nine in 2007. Efforts to improve the contraceptive prevalence rate and unmet needs of family planning amongst pockets of high-risk mothers, living in remote, inaccessible areas are undertaken.

Conclusion: To improve the maternal health further, education and empowerment of women are essential commodities to enhance better reproductive health services. The scope of Maternal and Child Health facilities need further appraisal and urgent implementation.

P1.249
Relationship between low Vitamin D and respiratory and bone density

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Introduction: Vitamin D is essential in helping the body absorb calcium, a critical component of healthy bones and teeth . It is also suggested that the vitamin might play a critical role in the health of the immune system. More than half of pregnant women today do not have sufficient amounts of vitamin D, even with prenatal vitamin supplements as part of their regimen.

Methods: Systematic review article.

Result: Some previous studies showed cord-blood level of vitamin D at birth would be associated with more respiratory infections and wheezing even several years later. According to a study, women who do not get enough vitamin D while pregnant place their children at increased risk for tooth enamel defects and early childhood tooth decay. Other findings provide evidence that maternal vitamin D status during pregnancy influences the bone growth of the offspring, and their risk of osteoporosis and childhood fracture in later life. In a different study, offered evidence showing that children born to mothers with higher vitamin D levels during pregnancy have stronger skeletons.

Conclusion: Vitamin D deficiency in infants can cause rickets, a softening of the bones that can lead to deformity and other complications. Low levels of vitamin D have also been linked to increased risk for asthma and respiratory infections. Women who took vitamin D supplements and women who were exposed to higher levels of sunshine in pregnancy were less likely to be deficient in vitamin D.

P1.250
Interesting case of management of severe thrombocytopenia (platelet count – 600 000) in pregnancy

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Introduction: Immune thrombocytopenia (ITP) has maternal and foetal risks in pregnancy. Multidisciplinary approach is essential for the management of ITP in pregnancy. We report a case with ITP who presented with platelet count of 6×10^5.

Case report: A 27 year old G2P1 presented in her 2nd pregnancy having had a elective caesarean section in her 1st pregnancy for breech presentation at Bangladesh. She was known to have ITP but had not had any treatment. Her booking platelet count was 6×10^5. She had not any bleeding episodes or history of bruising easily. She was managed with Immunoglobulin throughout the pregnancy and had a elective caesarean section at 38 weeks. Her platelet count at delivery was 106×10^5. She made an uneventful postoperative recovery and the baby's platelets at discharge was normal.

Summary: The management of ITP in pregnancy includes careful monitoring of the platelet count and treat with immunoglobulin if needed. The other treatment options include steroids and Anti D. Fetal platelet counts can be obtained by fetal scalp sampling during labour or cordocentesis at 3839 weeks of estimated gestation; however, neither is reliable at predicting thrombocytopenia at birth. Fetal scalp sampling is technically difficult and often unreliable. At present, universal prenatal screening is not recommended because a clear clinical benefit has not been demonstrated.

P1.251
Perimortem caesarean section: a reality

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Perimortem caesarean section is a neglected area. We hardly get teaching particular to this subject. Maternal cardiac arrest due to multiple reasons is one of the most important causes of maternal and perinatal mortality and morbidity. I feel this needs particular attention as this may be life saving in many situations but at the same time it is an extremely difficult decisions and needs a lot of counselling patients relatives and a very sensitive issue in many cultures. We need to include training on this important aspect of maternal care and it should be part of the curriculum for training. It should definitely be part of advanced life support training in obstetrics. It also requires training of non obstetric staff including the medical and paramedical staff in Accident & Emergency departments and awareness of community is also extremely important. In developing countries, where transport facilities are not so good and the healthcare centres are far away where women need to travel sometimes great distances to reach a hospital, the trained staff on this subject may save lives of both mother and baby. Perimortem caesarean section, if done in appropriate time, is really life saving.

P1.252

Induction of labour with Foley's catheter in women with previous caesarean section

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Induction of labour in women with previous caesarean section is a major concern because of increased risk 23 fold of uterine rupture compared to those without previous caesarean section. Mechanical induction with Foley's catheter had been shown less risk of uterine rupture and maternal morbidity with good success rate of vaginal delivery.

Objective: To review the outcome of induction of labour with Foley's catheter in women with previous caesarean section.

Design: A 1 year prospective observational study conducted in Hospital Melaka from January 2010 to December 2010.

Methods: Women with one previous caesarean section who consented for induction of labour and had their labour induced with Foley's catheter. All indication of IOL, initial cervical Bishop's score and labour outcome in these women were recorded and analysed. Main outcome measures: Labour outcome and incidence of any maternal morbidity such as uterine rupture.

Results: A total of 104 women with one previous caesarean section were included in this study. Sixty-six women had successful vaginal delivery (63.5%) and 38 had repeat caesarean section. Eighty-one (77.9%) women needed augmentation with oxytocin until delivery. Among these women, three of them had complication during labour with scar dehiscence or ruptured. No babies were admitted for any perinatal complications.

Conclusion: In women with one previous caesarean section, induction of labour using Foley's catheter is a safe option with good successful rate of vaginal delivery. However multiple factors play a role in determining the success of induction process with Foley's catheter.