THE OCCLUSIVE CONTACT LENS (OCL) 
THE LAST RESORT TREATMENT OF AMBLYOPIA.

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Introduction

- Amblyopia is a leading cause of monocular visual impairment in children and young adults.

- Amblyopia is estimated to afflict 1–4% of children.

- Conventional Treatment involves patching and/or atropinization.
Introduction

- The efficacy of opaque contact lenses as occlusion therapy for amblyopia has been established in the literature.

- In cases noncompliant with conventional treatment successful use of occlusive contact lenses (OCLS) has been reported.
Purpose of Study

- To evaluate the use of (OCLs) in treating amblyopia in children who failed the conventional amblyopia treatment.
- To report on the side effects.
Methods

- Retrospective analysis of case notes of all children who had occlusive contact lens used to treat amblyopia between Oct 2003 and Jan 2010 in UHW
Methods

ício Data was collected on:

- Type of amblyopia
- Treatment and compliance to treatment and its duration prior to the use of OCLs
- Age at the start of OCL treatment
- Duration of OCL wear
- Side effects on the treated and untreated eye
- Compliance with OCL wear
- Visual acuity outcomes
Materials

- A standard 13mm diameter soft contact lens (Leadasoft 65, Hydrophilic, by David Thomas, England, with a 9mm black occlusive zone, BC 7.80) was initially used.
- The first two patients had a plano lens and subsequent patient had a plus 10 dioptre lens used.
Results

- There were 15 patients identified.

- Two patients were excluded:
  - One has lost follow up shortly after the insertion of the OCL
  - The other has no enough information in his medical records.
GENDER

AGE

- Age range: 2-7 years
- Age average: 4 year
Type of Amblyopia

- Strabismic Amblyopia: 5 cases
- Anisometropic Amblyopia: 5 cases
- Deprivation Amblyopia: 4 cases
Deprivation Amblyopia

- Congenital Cataract; 3
- IIIrd nerve palsy with complete Ptosis; 1
Pre OCL treatment

- All patients had pre OCL conventional amblyopia treatment.
  - All patients had Patching treatment
  - Period of patching varied between 5 – 24 months
  - Average period of patching: 14.5 months.
  - Duration of daily patching varies between FT to 1-2 hrs /day.
Reason of Discontinuation of Patching

- Poor Compliance: 11
- Reaction to Patches: 2
- No Response: 1
Atropinization

N; 4
Y; 10
Atropinization

- Duration of Atropinization:
  - Ranges: 2-9 months.
  - Average of 4 months.
- Atropinization was discontinued as there was no improvement in VA.
OCL Treatment

- Duration of OCL:
  - Ranges from (4 weeks to 6 months; average 2.2 months).
Results; VA

IMPROVED, 9, 69%
NO CHANGE, 3, 23%
WORSENING, 1, 8%

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Improvement in VA

- Improvement in VA of the amblyopic eye after OCL use was noticed in nine patients (69%).
- No change in vision noticed in three patients.
- One patient has worsening of his vision in his Amblyopic eye (pre OCL use VA 1.0, post OCL use 1.3).
Change in VA
Pre OCL. VA

- Range from: (6/24 - poor fixation with the amblyopic eye
  - Logmar (0.6 – 3) *
  - Mean; 1.48 Logmar

Post OCL. VA

- Range from: (6/9-2/60) with the amblyopic eye
  - Logmar (0.2 – 1.4)
  - Mean 0.81 Logmar.
Improvement in VA

- Mean: from 1.48 to 0.81 Logmar in the improved group.
Complications

- Conjunctivitis: 3
- Corneal Abrasion: 1
- Corneal Ulcer: 1
- Poor Compliance: 5
Complications

- Reported complications related to OCLs use were:
  - conjunctivitis in 3 patients;
  - one patient had peripheral corneal ulcer which was treated successfully
  - One patient noticed to have corneal abrasion.
  - Compliance was poor in 5 patients who repeatedly rubbed out the contact lens.
  - No occlusion amblyopia was noticed in any patient
Conclusion

- An OCL is a useful last resort treatment for amblyopia in cases where conventional treatment with patching or atropinization has failed.

- There was a modest improvement in visual acuity

- There was no occlusion amblyopia

- There was frequent loss of the lens as a result of eye rubbing and a number of treatable side effects
References:


* Source: The Epidemiology of Eye Diseases. Johnson GJ. London 2003, Arnold