The effect of Topical Application of Extra Virgin Olive Oil on Alleviating Knee Pain in Patients with Knee Osteoarthritis: A Pilot Study

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ABSTRACT
Objective: To investigate and compare the effect of topical application of extra virgin olive oil (EVOO) on the pain of osteoarthritic knee (s) with the effect of non-steroidal anti-inflammatory drugs.
Participants: A convenient sample of thirty patients with knee(s) osteoarthritis (16 females and 14 males) were randomly assigned to three groups; Group A (n=10) treated with topical application of EVOO and exercise, group B (n=10) received topical non-steroidal anti-inflammatory drugs (Ketoprofen gel) over the knee(s) and exercise, and group C received therapeutic exercise only.
Method: Treatment was carried out in physical therapy outpatient clinic for 5 days a week for two weeks. Group A received topical EVOO (3ml) and group B received topical ketoprofen gel (3 cm2) three times a day followed by therapeutic exercise. Group C received therapeutic exercise only three times a day. Pain visual analog scale (VAS) and Western Ontario and McMaster (WOMC) universities index measurement were taken at baseline and after two weeks of treatment.
Results: All groups showed significant improvement ($p<0.001$) in VAS and WOMC index after two weeks of treatment compared to the baseline. Group comparison showed no significant difference in both scales between groups A and B ($p>0.05$), however, both groups significantly experienced less pain than group C ($p<0.001$).
Conclusion: Topical application of EVOO showed to be effective in alleviating the symptoms of patients diagnosed with knee osteoarthritis compared to topical application of NSAID.
Keywords: *Physical Therapy, Osteoarthritis, Olive Oil, Knee Pain, NSAID, ketoprofen*