

A Direct Comparison of Topical Pain Treatments for Acute Musculoskeletal Pain

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Purpose

Topical analgesics are important products in the armamentarium for pain relief. This study compared a topical analgesic product containing menthol to the same product with the addition of oxygenated glycerol triesters (OGTs) (also called essential oxygen oil) in 66 healthy adult subjects with acute musculoskeletal pain.

Method

Patients were randomized in a single-center, double-blind study to receive mentholated cream only (MC) or mentholated cream containing oxygenated glycerol triesters (MC-OGT). Patients recorded pain, lifestyle limitations, and mobility at baseline and three times daily over a seven-day course and on Day 8, when they reported to the clinic for a clinical examination of signs of dryness or erythema. Pain, limitations, and mobility scores were recorded on a 100 mm visual analog scale (VAS); patients also kept daily diaries.

Results

Patients in both groups (MC and MC-OGT) experienced statistically significant pain relief on Day 8 over baseline, with the MC-OGT group reporting significantly greater pain relief than the MC group. The MC-OGT group had better scores than the MC group for improvement of lifestyle limitations and mobility, but these did not achieve statistical significance. Both products were well tolerated with no serious adverse events reported and no signs of dryness or erythema in either group.

Conclusions

Based on this study, essential oxygen oil (MC-OGT product) is safe, effective, and provides significantly greater pain relief than mentholated cream alone.