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## BACKGROUND

Topical Cold-induced analgesia elicited by low-dose menthol application to manage neuropathic pain (NP) is a novel therapy being explored internationally<sup>1</sup>. Menthol (from mint leaves) selectively activates TRPM8 receptors in selected sensory neurones showing increased expression after nerve injury.

Previous clinical audits of leprosy-affected patients (LAP) in our hospital<sup>2</sup> highlighted significant burdens as 51%(69/136) LAP had NP with moderate-severe impact on sleep (64%) mood (81%) and daily function (87%). Other international studies have shown similar results <sup>3,4,5,6,7</sup>.

Previously a smaller case series reported on the effectiveness of 2% menthol in mustard oil for people suffering NP from various conditions referred to the palliative care service.

## OBJECTIVES

To explore the effectiveness of topical menthol in oil for NP from various conditions.

## METHODS

Case series using topical menthol 2% (or 5% if there was no response with 2%) in mustard oil (or sunflower oil as alternative), and compounded locally. Preparation was applied to NP affected areas (& spine) twice daily for 6 weeks. Assessment was made using Brief Pain Inventory Short Form (BPI-SF) and Leeds Assessment Neuropathic Symptoms and Signs (LANSS) at: pre-application, 2-hours post-application, 2-week and 6-weeks (where possible).

## CONCLUSION

Topical menthol in oil to treat NP in LAP and other conditions leads to significant relief and is feasible in low-income settings . Controlled trials to test effectiveness of this novel intervention are required to confirm these effects.

## RESULTS

298 pain episodes in 167 individuals: 133 LAP; 34 SCI, Stroke, Cancer

### Maximum severity score 10/10

≥30% improvement from baseline: At 2 hour 18% (34/186);  
2 week 94% (67/71); 6 week 80% (33/41)

2.7% (8/298) had total relief

### Total BPI-SF (score 110)

≥30% improvement from baseline: At 2 hour 13% (24/186);  
2 week 74% (51/71); 6 week 85% (35/41).

### LANSS (score 24)

≥30% improvement from baseline: 2 hour 25% (46/186);  
2 week 87% (62/71); 6 week 75% (30/41).

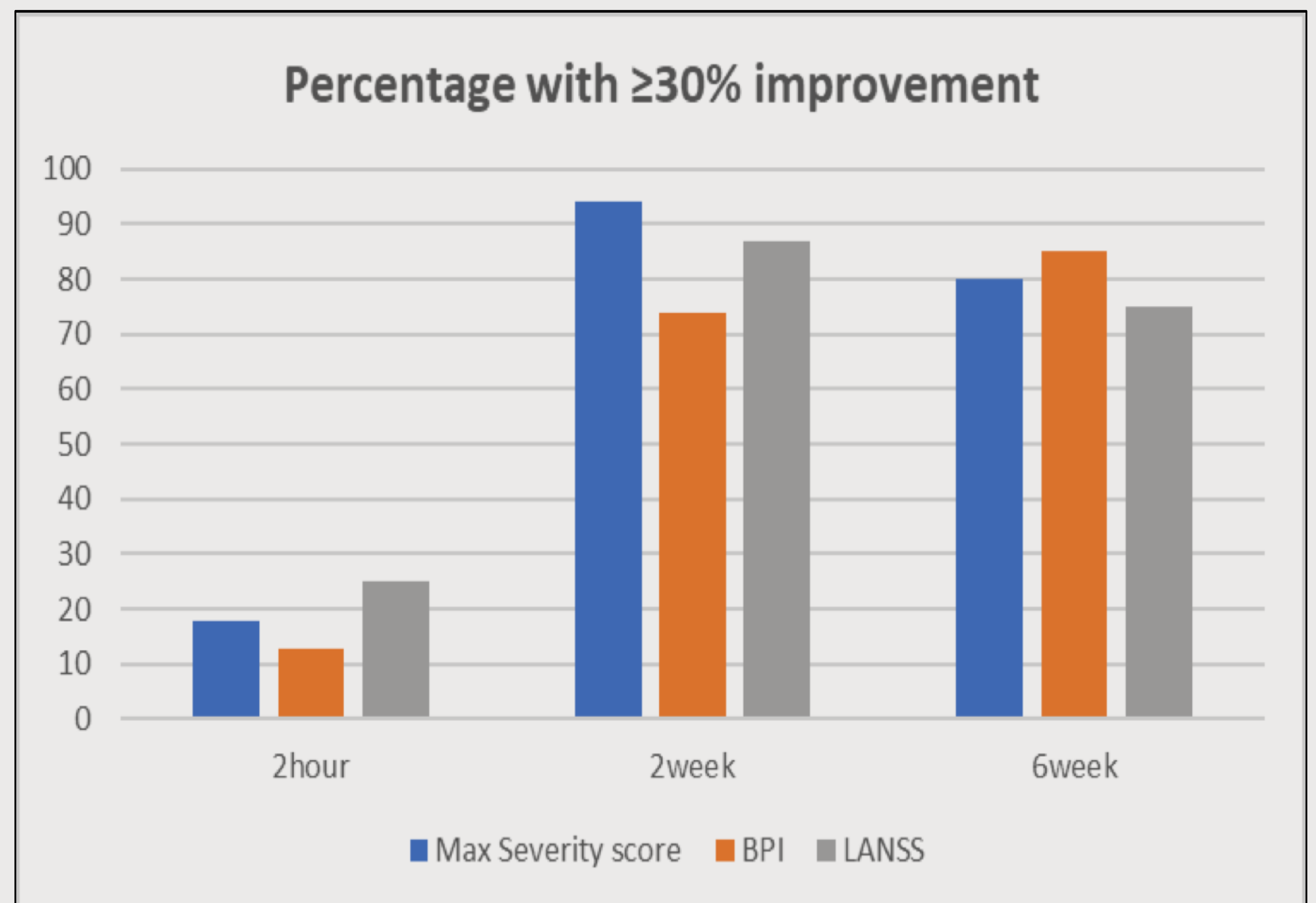


Figure 1: Menthold Positive Impact

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