

Evidence-based Medicine Category

Best Oral Paper Presentation

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Neural Tissue Management: Sliding Towards a Better Understanding of its Efficacy on Pain and Disability in Nerve-related Chronic Musculoskeletal Pain—A Systematic Review with Meta-Analysis

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Aims: In nerve-related chronic musculoskeletal (MS) disorders, neural tissue management is used to relieve pain by balancing the relative movement of neural tissues and their surrounding tissues. However, no meta-analysis has evaluated the effects of neural tissue management on pain and disability in nerve-related chronic MS pain conditions. The aim of this review was to compare pain and disability in individuals with nerve-related chronic MS pain who were treated with neural tissue management compared to those receiving minimal intervention or other treatment approaches.

Methodology: Clinical controlled trials were reviewed if pain and disability scores were measured, subjects had chronic MS pain and the study design involved comparing neural mobilisation with minimal intervention or other treatment approaches. Data for pain and disability scores were then extracted. Meta-analyses (where possible) with either a fixed- or random- effect(s) model, standardised mean differences (SMDs), and tests of heterogeneity were performed.

Result: Twenty clinical controlled trials were identified and included in the meta-analyses. When compared to minimal intervention, neural tissue management provided superior pain relief (pooled SMD -0.77, 95% confidence interval [CI] -1.11 to -0.42, $P < 0.0001$), and reduction in disability (pooled SMD -1.06, 95% CI -1.97 to -0.14, $P = 0.02$), after post-hoc sensitivity analyses. No significant differences were found when comparing neural tissue management to other treatment approaches for pain (pooled SMD -0.67, 95% CI -2.03 to 0.69, $P = 0.33$), after post-hoc sensitivity analysis, and disability (pooled SMD -0.03, 95% CI -0.54 to 0.59, $P = 0.93$).

Conclusion: Neural tissue management is superior to minimal intervention for pain relief and reduction of disability in nerve-related chronic MS pain. Existing evidence does not establish superiority of neural mobilisation over other forms of intervention in reducing pain and disability for individuals with nerve-related chronic MS pain.