

## RELATIVE EFFICACY OF INJECTIONS FOR FUNCTIONAL IMPROVEMENT IN OVERUSE INJURIES: A SYSTEMATIC REVIEW AND NETWORK META-ANALYSIS

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**Introduction:** A wide range of injection agents and techniques are currently in use to treat overuse injuries (such as tendinopathy and enthesopathies). The relative efficacy (or ranking) between these treatments remained unknown. A network meta-analysis (NMA) was thus undertaken to summarize the relative efficacy of different types of injection for self-reported outcomes. NMA is a new technique of meta-analysis that can perform multiple comparisons simultaneously, even in the absence of direct clinical trials.

**Methodology:** This analysis, which focused on functional outcomes, utilised data extracted from a larger study. Detail methods of the larger NMA can be found in PROSPERO (CRD42020149740). Briefly, four online databases were used to retrieve randomised clinical trial reports, irrespective of language and publication year, that had investigated injection therapies. Search was recently updated in January 2021.

**Discussion:** Of the 87 studies eligible under the larger NMA, 60 studies (5133 participants) were used for this summary synthesis. Five injectable agents, needling, surgery, wait-and-see and non-injection therapies were simultaneously compared with placebo injection. Before 4 months, blood products had the largest effect size (ES) and smallest 95% confidence interval (CI) (1.15; 0.38, 1.93) compared to CS (0.33, -0.45, 1.11) and Prolo (0.65, -0.27, 1.57). The efficacy of BP for function decreased over time but remained greater than CS and Prolo even after eight months.

**Conclusion:** Despite variation in trajectory of treatment response, functional improvement observed with injection therapies is likely to regress over time, towards those observed for placebo injection. This suggests overuse injuries may not be fully reversible with injections.