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Corticosteroid injections for shoulder pain

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Summary

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Corticosteroid injections may be of limited short-term benefit for shoulder pain

The available evidence from randomized controlled trials supports the use of subacromial corticosteroid injection for rotator cuff disease, although its effect may be small and short-lived, and it may be no better than non-steroidal anti-inflammatory drugs. Similarly, intra-articular steroid injection may be of limited, short-term benefit for adhesive capsulitis. Further trials investigating the efficacy of corticosteroid injections for shoulder pain are needed. Important issues that need clarification include whether the accuracy of needle placement, anatomical site, frequency, dose and type of corticosteroid influences efficacy.

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Abstract

Background

While many treatments, including corticosteroid injections in and around the shoulder, are advocated to be of benefit for shoulder pain, few are of proven efficacy. This review of corticosteroid injections for shoulder pain is one in a series of reviews of varying interventions for shoulder disorders.

Objectives

To determine the efficacy and safety of corticosteroid injections in the treatment of adults with shoulder pain.

Search strategy

MEDLINE, EMBASE, CINAHL, Central and Science Citation Index were searched up to and including June 2002.

Selection criteria

Randomised and pseudo-randomised trials in all languages of corticosteroid injections compared to placebo or another intervention, or of varying types and dosages of steroid injection in adults with shoulder pain. Specific exclusions were duration of shoulder pain less than three weeks, rheumatoid arthritis, polymyalgia rheumatica and fracture.

Data collection and analysis

Trial inclusion and methodological quality was assessed by two independent reviewers according to predetermined criteria. Results are presented separately for rotator cuff disease, adhesive capsulitis, full thickness rotator cuff tear and mixed diagnoses, and, where possible, combined in meta-analysis.

Main results

Twenty-six trials met inclusion criteria. The number, site and dosage of injections varied widely between studies. The number of participants per trial ranged from 20 to 114 (median 52 participants). Methodological quality was variable.

For rotator cuff disease, subacromial steroid injection was demonstrated to have a small benefit over placebo in some trials however no benefit of subacromial steroid injection over NSAID was demonstrated based upon the pooled results of three trials.

For adhesive capsulitis, two trials suggested a possible early benefit of intra-articular steroid injection over placebo but there was insufficient data for pooling of any of the trials. One trial suggested short-term benefit of intra-articular corticosteroid injection over physiotherapy in the short-term (success at seven weeks RR=1.66 (1.21, 2.28)).

Authors' conclusions

Despite many RCTs of corticosteroid injections for shoulder pain, their small sample sizes, variable methodological quality and heterogeneity means that there is little overall evidence to guide treatment. Subacromial corticosteroid injection for rotator cuff disease and intra-articular injection for adhesive capsulitis may be beneficial although their effect may be small and not well-maintained.

There is a need for further trials investigating the efficacy of corticosteroid injections for shoulder pain. Other important issues that remain to be clarified include whether the accuracy of needle placement, anatomical site, frequency, dose and type of corticosteroid influences efficacy.