

**Efficacy and safety of corticosteroid injections for management of
tendinopathy:
A systematic review of randomised controlled trials**

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FROM ABSTRACT:

Background

Few evidence-based treatment guidelines for tendinopathy exist. We undertook a systematic review of randomised trials to establish clinical efficacy and risk of adverse events for treatment by injection.

Methods

We searched eight databases without language, publication, or date restrictions. We included randomized trials assessing efficacy of one or more peritendinous injections with placebo or non-surgical interventions for tendinopathy, scoring more than 50% on the modified physiotherapy evidence database scale. We undertook meta-analyses with a random-effects model, and estimated relative risk and standardised mean differences.

The primary outcome of clinical efficacy was protocol-defined pain score in the short term (4 weeks, range 0–12), intermediate term (26 weeks, 13–26), or long term (≥ 52 weeks).

Findings

3824 trials were identified and 41 met inclusion criteria, providing data for 2672 participants. We showed consistent findings between many high-quality randomised controlled trials that corticosteroid injections reduced pain in the short term compared with other interventions, but this effect was reversed at intermediate and long terms.

THESE AUTHORS ALSO NOTE:

- 1) “Overuse disorders of tendon or tendinopathies affect active young people (20–30 years old) and middle-aged people (40–60 years old) and are often difficult to manage successfully.”
- 2) “These disorders are characterized by angiofibroblastic hyperplasia, including hypercellularity, neovascularisation, increased protein synthesis, and disorganisation of matrix, but not inflammation.” [**“The Fibrosis of Repair”**]
- 3) “This absence of inflammation, along with poor long-term outcomes and adverse effects, has led investigators to question the use of corticosteroid injections for treatment.”

RESULTS

- 4) "Compared with non-injection interventions, there was strong evidence for benefit of corticosteroid injections in the short term across all outcome measures for treatment of lateral epicondylalgia."
- 5) "Strong evidence suggests that corticosteroid injections are less beneficial than are other interventions for treatment of lateral epicondylalgia at 26 weeks."
- 6) "Inferior reductions in pain were reported after corticosteroid injection compared with no intervention, NSAIDs, physiotherapy, and platelet-rich plasma injections."
- 7) "Repeated corticosteroid injections (average of 4 injections, range of 3-6 in 18 months) were associated with a poorer long-term effect on reduction in pain than were interventions with one injection."

DISCUSSION

- 8) "We have shown strong evidence that corticosteroid injection is beneficial in the short term for treatment of tendinopathy, but is worse than other treatment options in the intermediate and long terms."
- 9) "Use of corticosteroid injections, which are potent anti-inflammatories, poses a clinical dilemma because consistent findings suggest good short-term effects but tendinopathy does not have an inflammatory pathogenesis. Altered release of toxins and inhibition of collagen, extracellular matrix molecules, and granulation tissue might provide a biological basis for this effect."
- 10) "Our systematic review challenges continued use of corticosteroid injections by providing strong evidence that they are worse in the long term than are most conservative interventions for tendinopathy."
- 11) "Injection into the tendon might weaken its structure and increase probability of rupture."
- 12) "Moderate evidence of harmful effects of repeated corticosteroid injection on pain was noted."

COMMENT FROM DAN MURPHY

Many of our patients are advised to have their tendinopathies treated with corticosteroid injection, and consequently they ask us for advice. This systematic review of randomized controlled trials indicates that these injections are beneficial in the short term (at 8 weeks), but are worse than conservative treatments in the intermediate (26 weeks) and long (≥ 52 weeks) terms. In addition, "Injection into the tendon might weaken its structure and increase probability of rupture."