

Physiotherapy or a wait-and-see policy was the best option for lateral epicondylitis at 1 year

Smidt N, van der Windt DA, Assendelft WJ, et al. Corticosteroid injections, physiotherapy, or a wait-and-see policy for lateral epicondylitis: a randomised controlled trial. *Lancet*. 2002 Feb 23;359:657-62.

QUESTION

In patients with lateral epicondylitis, what is the effectiveness of a wait-and-see policy, physiotherapy, or corticosteroid injections?

DESIGN

Randomized (allocation concealed*), blinded (outcome assessors),* controlled trial with 1-year follow-up.

SETTING

Practices of 85 family doctors in The Netherlands.

PATIENTS

185 patients who were 18 to 70 years of age (median age 47 y) with pain at the lateral side of the elbow that increased with pressure on the lateral epicondyle and with resisted dorsiflexion of the wrist. Exclusion criteria included physiotherapy or corticosteroid injections for elbow pain in the previous 6 months; bilateral elbow symptoms; duration of pain for < 6 weeks; dislocation, tendon ruptures, or fractures near the elbow in the preceding year; and systemic musculoskeletal or neurologic disorders. Follow-up was 99%.

INTERVENTION

Patients were allocated to corticosteroid injections (up to 3 injections of 1 mL of triamcinoloneacetonide and 1 mL of lidocaine 2%) ($n = 62$) by their family doctors, physiotherapy (9 treatments of pulsed ultrasonography, deep friction massage, and an exercise program) ($n = 64$), or a wait-and-see policy (patients visited their family doctors once during the 6-wk intervention period to

discuss activities that provoked pain and to receive advice) ($n = 59$).

MAIN OUTCOME MEASURES

Change from baseline in self-reported success rates (6-point scale ranging from completely recovered to much worse; complete recovery and much improved were considered successes), severity of the main symptom, pain during the day, inconvenience, overall severity of elbow symptoms, pain-free grip strength, maximum grip strength, and elbow disability.

MAIN RESULTS

Analysis was by intention to treat. At 6 weeks, more patients in the injection group than in the physiotherapy and wait-and-see groups reported success (Table). Other out-

comes were also more improved in the injection group. However, at 1 year, more patients who received physiotherapy rather than corticosteroids reported success. The physiotherapy and wait-and-see groups did not differ (Table).

CONCLUSION

In patients with lateral epicondylitis, physiotherapy or a wait-and-see policy were the best long-term treatment options.

Sources of funding: Health Insurance Council and the Netherlands Organisation for Scientific Research.

For correspondence: Dr. N. Smidt, VU University Medical Centre, Amsterdam, The Netherlands. E-mail n.smidt.emgo@med.vu.nl.

*See Glossary.

Success rates for corticosteroid injections (Cort), physiotherapy (Phys), and a wait-and-see policy (WS) for lateral epicondylitis†

| Follow-up | Cort | Phys | WS | RBI (95% CI) | NNT (CI) |
|-----------|------|------|-----|--------------------|-----------------|
| 6 weeks | 92% | — | 32% | 185% (102 to 326) | 2 (2 to 3) |
| | — | 47% | 32% | 46% (−6.4 to 131) | Not significant |
| | 92% | 47% | — | 96% (53 to 163) | 3 (2 to 4) |
| 1 year | — | — | 83% | 16.5% (−2.1 to 33) | Not significant |
| | — | 91% | 83% | 9.1% (−5.2 to 28) | Not significant |
| | 69% | 91% | — | 23% (9.1 to 38) | 5 (3 to 14) |

†Success = patient self-report of completely recovered or much improved; RBI = relative benefit reduction. Other abbreviations defined in Glossary; RBI, RBR, NNT, NNH, and CI calculated from data in article.

COMMENTARY

Lateral epicondylitis (tennis elbow) is commonly treated with activity modification, physiotherapy, nonsteroidal anti-inflammatory drugs (NSAIDs), and steroid injections. Acupuncture, orthotic devices, and surgery have also been used, albeit without much evidence to support them. The benefit associated with steroid injection is only short term, and long-term detrimental effects may exist (1).

In this study by Smidt and colleagues, more than 50% of patients treated with physiotherapy or injections reported such adverse effects as temporary increase in pain, pain radiating into the forearm, and swelling. Topical and oral NSAIDs have been shown to provide short-term symptom relief for lateral epicondylitis (2). Several patients in the physiotherapy and the wait-and-see groups in the study by Smidt and colleagues received NSAIDs, which may have influenced the results.

Activity modification to minimize repetitive stress is generally the

first step in treating lateral epicondylitis. Better evidence is required before definitive statements can be made about additional treatment. However, a simple wait-and-see approach combined with NSAIDs as required is probably the most cost-effective long-term strategy with the fewest adverse effects, although physiotherapy may also be useful.

*Hans J. Kreder, MD, MPH
University of Toronto
Sunnybrook & Women's College Health Science Center
Toronto, Ontario, Canada*

References

- Smidt N, Assendelft WJ, van der Windt DA, et al. Corticosteroid injections for lateral epicondylitis: a systematic review. *Pain*. 2002;96:23-40.
- Green S, Buchbinder R, Barnsley L, et al. Non-steroidal anti-inflammatory drugs (NSAIDs) for treating lateral elbow pain in adults. *Cochrane Database Syst Rev*. 2002;(2):CD003686.