Physiotherapy or a wait and see policy were the best options 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

Randomised (allocation concealed*), blinded (outcome assessors)*, controlled trial with 1 year of 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 neurological disorders. Follow up was 99%.

Intervention

Patients were allocated to corticosteroid injections (up to 3 injections of 1 ml of triamcinoloneacetone and 1 ml of lidocaine 2%) (n=62) by their family doctors, physiotherapy (9 treatments of pulsed ultrasonography, deep friction massage, and an exercise programme) (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 outcomes 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.

*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)
				RBR (CI)	NNH
1 year	69%	—	83%	16.5% (–2.1 to 33)	Not significant
	—	91%	83%	9.1% (–5.2 to 28)	Not significant
				RBR (CI)	NNH (CI)
	69%	91%	—	23% (9.1 to 38)	5 (3 to 14)

†Success = patient self report of completely recovered or much improved; RBR = 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, non-steroidal 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 *et al*, 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 *et al* received NSAIDs, which may have influenced the results.

Activity modification to minimise 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.

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- 1 Smidt N, Assendelft WJ, van der Windt DA, *et al*. Corticosteroid injections for lateral epicondylitis: a systematic review. *Pain* 2002;96:23–40.
- 2 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.