

Meenagh GK, Patton J, et al A randomised controlled trial of intra-articular corticosteroid injection of the carpometacarpal joint of the thumb in osteoarthritis. Ann Rheum Dis 2004;63:1260-63.

Design: Randomized clinical trial

Population/sample size/setting:

- 40 patients (36 women, 4 men, mean age 60) referred for treatment of thumb osteoarthritis to a hospital rheumatology department in Belfast
- All referred patients were eligible if they met American College of Rheumatology criteria for OA of the thumb
- Exclusion criteria were history of inflammatory arthritis, thumb base trauma, or previous steroid injection of the thumb

Main outcome measures:

- Randomized to injection with 0.25 ml with 5 mg triamcinolone (n=20) or 0.25 ml normal saline (n=20) with an opaque syringe
- Blinded assessments done at baseline and repeated at 4, 12, and 24 weeks by the investigator who performed the baseline assessment
- Thumb carpometacarpal joint pain on a 100 mm VAS did not change over time in either the saline or steroid injection group
- Similarly, early morning joint stiffness (recorded by the patient in minutes) and joint tenderness (recorded by the investigator) did not improve in either group over the course of the study
- For the saline group, both the patient's and the physician's global assessment improved at all time periods after baseline; for the steroid group, both global assessments improved at 4 and 12 weeks, but returned to baseline level at 24 weeks
- Sample size requirements were calculated before the study began, and 45 patients were required in each group in order to detect a 20% improvement in outcome measures; however, because recruitment proved to be difficult, only 20 patients entered each group

Authors' conclusions:

- No benefit was found in steroid injection for primary moderate to severe thumb base OA
- However, the study was underpowered due to poor recruitment, and this caveat should influence the interpretation of the study results

Comments:

- Design, randomization, and blinding are all satisfactory
- The lack of statistical power was due to practical difficulties with recruiting enough patients, and precludes making conclusions about steroid injection

Assessment: High-quality design and execution, but inconclusive for an evidence statement about steroid injection for thumb OA