Fuchs S, Monikes R, et al. Intra-articular hyaluronic acid compared with corticoid injections for the treatment of rhizarthrosis. Osteoarthritis and Cartilage 2006;14:82-88.

Design: Randomized clinical trial

Brief summary of results:

- 56 patients (11 men, 45 women, median age 60) with 6 months of symptomatic thumb osteoarthritis treated at 2 orthopedic departments in Germany
- Exclusion criteria included alcohol/drug abuse, intra-articular steroid within 3 months or hyaluronate injection within 6 months prior to study, joint effusion, inflammatory joint disease or infection
- All had 3 weekly intra-articular injections, randomized to hyaluronate (n=28) or to triamcinolone suspension (n=28)
- Blinded observers measured effectiveness at 3, 14, and 26 weeks after the first injection; pain VAS, heat/swelling/crepitations, lateral (key) pinch grip, pulp pinch grip, and range of motion were the main outcomes
- In the short term, steroid relieved pain faster than hyaluronate up to week 14; at the 26 week evaluation, hyaluronate was superior to steroid (56% pain relief vs. 23% pain relief)
- Joint function was approximately equal in both groups at baseline and follow-up for key pinch, pulp pinch, and range of motion

Authors' conclusions:

- Both hyaluronate and steroid injections effectively treat thumb OA
- Steroid shows faster pain relief, but hyaluronate shows better long-term results
- A placebo group was lacking, and data collection may have been biased because it was collected by orthopedists who delivered therapy

Comments:

- Several points of ambiguity and confusion seem to be present
- The methods section states that outcomes were measured by masked observers, but the discussion section states that data was collected by the treating orthopedists
- The "analysis of homogeneity" section does not deal with a statistical analysis of that name, but simply looks at baseline comparability of treatment groups
- There is a statement that for joint function after 6 months, "moderate superiority of the SH group was found), but the proportions of improvement given (52% for the hyaluronate group and 42.3% for the steroid group) can be calculated to have very wide confidence intervals, with no difference between groups
- Authors appear to be stretching criteria for significance; lateral pinch pain shows a "slight superiority" of the hyaluronate group at 6 months, but the p value is 0.1966

- Pain scores were expressed as median rather than as mean values “for reduction of outliers’ impact,” but since VAS is on a scale of 0-10, it is not clear that outliers are relevant, as they are on scales with no imposed ceiling
- Method of randomization is not given, nor can concealment be assumed

Assessment: Inadequate for superiority of either injection either to placebo or to one another at any follow-up time