**Jahangiri A, Moghaddam F, Najafi S. Hypertonic dextrose versus corticosteroid local injection for the treatment of osteoarthritis in the first carpometacarpal joint: a double-blind randomized clinical trial. J Orthop Sci. 2014 Sep;19(5);737-43.**

PMID:25158896

Design: randomized clinical trial

Purpose of study:

* To compare the effectiveness of two injection treatments of OA of the base of the thumb: corticosteroid and hypertonic dextrose (prolotherapy)

Summary of results and reasons not to cite as evidence:

* The authors randomized 60 patients with OA of the first carpometacarpal joint to one of two intervention groups: local corticosteroid (n=30) or hypertonic dextrose (n=30)
* The authors evaluated the patients at 1 month, 2 months, and 6 months, comparing them with respect to VAS pain intensity (primary outcome), pain on joint movement, and hand function on a self-administered questionnaire for activities such as eating, gripping, and dressing
* On the basis of a 1.1 point difference in favor of hypertonic dextrose at 6 months on the VAS, the authors concluded that prolotherapy is superior to local steroid injection for OA of the base of the thumb
* The study is not useful for evidence because of the nature of the treatment group comparisons
  + The hypertonic dextrose group received three active injections each month for three months
  + The steroid group received two injections of placebo saline each month for two months, followed by an active steroid injection in the third month
  + Therefore, the study does not compare hypertonic dextrose to any alternative treatment which would ever be undertaken in the real world; it is not conceivable that any clinician would contemplate treating a patient with two placebo injections followed by one active steroid injection, and the study fails to make a meaningful comparison between plausible interventions
  + IN addition the 1.1 is not clinically meaningful.