**Shakeel H, Ahmad TS. Steroid injection versus NSAID injection for trigger finger: a comparative study of early outcomes. J Hand Surg Am. 2012;37(7):1319-23.**

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Design: randomized clinical trial

Purpose of study : in patients with trigger finger, to compare the effectiveness of two injections: triamcinolone versus diclofenac

Population/sample size/setting:

* 100 patients (30 men, 70 women, mean age 57.5) treated for trigger finger at a university orthopedics department in Kuala Lumpur
* Entry required age over 16 with a clinical diagnosis of previously untreated trigger finger with a Quinnell grade of at least grade 2
	+ Grade 0 is normal movement
	+ Grade 1 is uneven movement
	+ Grade 2 is actively correctable triggering
	+ Grade 3 is passively correctable triggering
	+ Grade 4 is fixed deformity with a locked digit
* Exclusion criteria were previous splinting, injection, or therapy, trigger finger due to rheumatoid arthritis, infection at the site of injection, and allergy to diclofenac

Interventions:

* 110 patients were originally randomized, but only 100 patients were accounted for at the end of the study, and had been randomized to injection with steroid (n=50) or NSAID (n=50)
* 61 patients did not have diabetes; 23 had type 2 DM, and 16 had type 1 DM
* Injections were administered by one investigator, who placed the needle at the level of the A1 pulley of the affected finger using a 3 ml syringe containing 0.5 ml of medication without local anesthesia
	+ Steroid group received 20 mg of triamcinolone acetonide
	+ NSAID group received 25 mg diclofenac sodium
* After the injection, no other interventions were described by the authors

Outcomes:

* Followup was done by blinded examiners at 3 weeks and 3 months after injection
* The primary outcome was the degree of triggering by the Quinnell system, which was ascertained at baseline and again at both followup visits
	+ At baseline, the groups were statistically balanced between Quinnell grades 2, 3, and 4
		- Steroid group had 6 patients at grade 4, 11 at grade 3, and 33 at grade 2
		- NSAID group had 1 patient at grade 4, 18 at grade 3, and 31 at grade 2
	+ At 3 weeks, the steroid group had a more favorable distribution of Quinnell grades (e.g. , 29 steroid patients were grade 0 versus only 8 NSAID patients)
	+ At 3 months, the groups were again statistically balanced, with no patients at grades 3 or 4
		- The steroid group had 4 patients at grade 2, 11 at grade 1, and 35 at grade 0
		- The NSAID group had 11 patients at grade 2, 11 at grade 1, and 28 at grade 0
	+ The improvements in Quinnell grading from baseline to 3 months was statistically equal between groups
	+ In the steroid group, 10 patients had complications (pain at the injection site for 1 patient and recurrence of triggering in 9 patients)
	+ In the NSAID group, 8 patients had complications (5 with pain or swelling at the injection site, 2 with stiffness of the injected finger, and 1 with recurrence of triggering)

Authors’ conclusions:

* The outcomes of steroid and NSAID injection were equally good at 3 months, and the NSAID group was not at risk of glycemic problems associated with steroid injections
* It is possible that the grade 4 patients did better with steroids, but this is difficult to compare because of a lack of similar studies
* In the short term (3 months), local NSAID injection is safe and has an effectiveness comparable to that of steroid

Comments:

* Blood glucose was not measured after the injections in the 39 diabetics who were recruited into the study, and the advantage of NSAID over steroid must be inferred from other sources
	+ It is not clear whether the authors were attempting to preferentially recruit diabetic patients into the study, but this is possible
* There were 6 patients in the steroid group with grade 4 trigger finger and only one patient in the NSAID group with grade 4; the groups were statistically balanced, but no inferences can be made about differences in response of more severe trigger finger to the two injections

Assessment: adequate for some evidence that in the intermediate term (up to three months), injections with triamcinolone and with diclofenac are equally effective in patients with trigger finger