

A COMPARATIVE STUDY BETWEEN ULTRASOUND GUIDED VERSUS NON GUIDED INJECTION IN TRIGGER FINGER TREATMENT

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Introduction

Trigger finger (or stenosing tenosynovitis) manifests as unusual pain in the palm during movement of the affected finger, with a snapping sound during extension and flexion, as well as locking of the finger that needs active manipulation to extend it. It usually affects the thumb and ring fingers of the dominant hand. It is caused by hypertrophy and inflammation of the A1 pulley of the flexor tendon, which interferes with normal tendon sliding motion. The hypertrophied pulley may present as a nodule opposite or proximal to the metacarpophalangeal joint. Many treatment plans for trigger finger usually start with rest and splint, followed by local steroid injection, and finally, surgical release. For steroid injection, a mixture of steroid and local anesthetic is usually utilized. There are two methods of injection: non-guided injection and ultrasound-guided injection. Ultrasound-guided injection is thought to offer higher accuracy of injection and, hence, presumably good clinical results.

Aim of the work

This work aimed to compare ultrasound-guided corticosteroid-local anesthetic mixture injection in the management of trigger finger versus non-targeted corticosteroid-local anesthetic mixture injection regarding tolerability of the procedure, clinical effectiveness, and the duration of symptom relief.

Patients and Methods

This study was carried out on 30 patients with trigger fingers for more than 4 weeks; 15 of them were referred to the Radiodiagnosis Department for ultrasound-guided corticosteroid-local anesthetic mixture injection, and 15 of them were referred to the Orthopedic Department for non-targeted corticosteroid-local anesthetic mixture injection. All patients from both groups were followed up over the phone at one week, two weeks, one month, and 6 months after the procedure.

Results

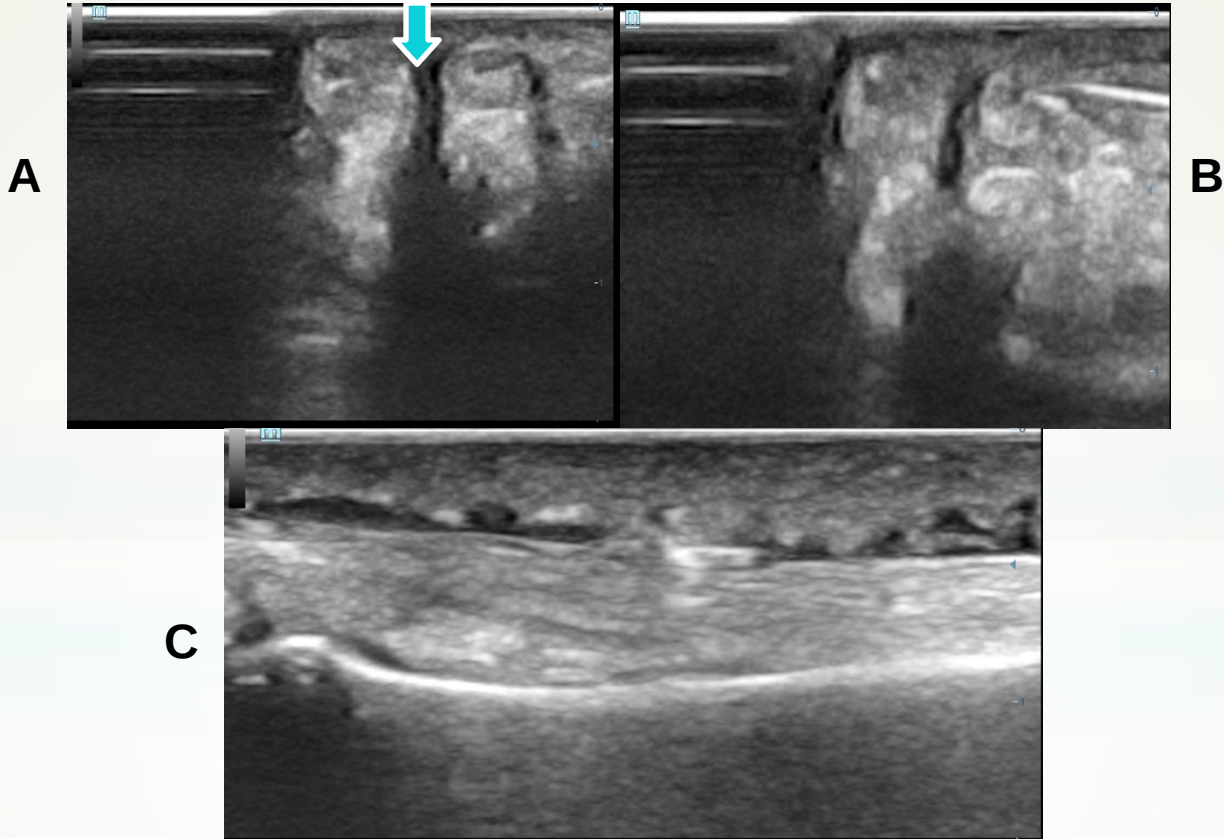


Figure 1. a) Axial ultrasound view of the flexor tendon of the right little finger surrounded by thickened A1 pulley. Dark blue arrow showing thickened A1 pulley, b) Axial ultrasound view showing injection of steroid into the tendon sheath, c) Longitudinal ultrasound view after steroid injection.

Table (1):Comparing the two studied groups regarding chemical pregnancy rate, clinical pregnancy rate, and multiple pregnancy rate

	Group (A), N = 15	Group (B), N = 15	p-value
Follow up 1 week			0.08
Good response	4 (27%)	10 (67%)	
Full recovery	11 (73%)	5 (33%)	
Follow up 2 weeks			0.14
Good response	10 (67%)	6 (40%)	
Reinjection	1 (6.7%)	0 (0%)	
Full recovery	4 (27%)	9 (60%)	
Follow up 1 month			0.59
Good response	14 (93%)	12 (80%)	
Reinjection	1 (6.7%)	3 (20%)	
Follow up 6 months			0.026*
Good response	14 (93%)	7 (47%)	
Reinjection	0 (0%)	3 (20%)	
Surgical release	1 (6.7%)	5 (33%)	

Conclusion

Ultrasound-guided injection provides a high efficacy rate in short and long-term recovery, with better long-term improvement compared to non-guided injections. Combined dry needling with ultrasound-guided injection may have a good additive value in clinical improvement.