

OPEN-RELEASE VS ULTRASOUND-GUIDED PERCUTANEOUS RELEASE VS ANATOMICAL PERCUTANEOUS TRIGGER FINGER RELEASE FOR STENOSING TENOSYNOVITIS: A COMPARATIVE STUDY AT THREE MONTHS

Prem S, Yugesh R, Lim ZL, Tan LH, Shan Srivenkdes S, Basirah NT, Khairullina K, Jacob A
Department of Orthopaedic Surgery, Hospital Tengku Ampuan Afzan, Pahang, Ministry of Health Malaysia

INTRODUCTION:

Open release of the A1 pulley is traditionally the most effective treatment for trigger finger. Nevertheless, both ultrasound-guided or anatomical percutaneous release with simultaneous cortisone injection is postulated to be a safe and minimally invasive alternative. We investigated the efficacy and morbidity of open release (OR) compared to ultrasound-guided (UPR) and anatomical percutaneous release (APR).

METHODS:

This was a single-centered retrospective audit of all cases intervened from July 2020 to December 2022. The choice of intervention was decided by the treating clinician and patient on an 'ad-libitum' basis. A total of 44 patients (52 fingers), 23 patients (30 fingers), 10 patients (12 fingers) underwent OR, UPR and APR respectively. Follow-up was conducted at 2-weeks and 3-months post-procedure. VAS pain score, modified Quinnell score, patient's satisfaction and days to return-to-work / activities of daily living (ADL) were assessed.

RESULTS:

All groups were similar at baseline except for underlying diabetes (OR=25/52 vs UPR =12/30 vs APR=4/12) and duration of triggering (OR: 8.90 ± 8.08 vs UPR: 6.23 ± 5.95 vs APR: 6.79 ± 4.80 months). More complications were reported within the OR group. Highest satisfaction were achieved in APR, followed by OR and UPR groups.

Outcomes	OR (N=52)	UPR (N=30)	APR (N=12)
Baseline Quinnell score	2.78 ± 0.457	2.55 ± 0.51	2.50 ± 0.52
VAS pain score at:			
2 weeks	1.83 ± 1.77	1.39 ± 1.28	1.17 ± 1.27
3 months	0.52 ± 1.33	0.31 ± 0.49	0.67 ± 1.07
Return to work/ADL (days)	20.35 ± 16.40	3.29 ± 2.61	3.21 ± 1.41
Patient satisfaction (Likert scale: 1-5)	4.40 ± 1.05	4.27 ± 0.66	4.42 ± 0.52
Post-procedural pain \geq 3mths	7	0	0
Recurrent triggering	1	1	0
Post-steroid flare	-	1	0
Stiffness	8	0	0
Tendon bowstring	3	-	-
Flexor tenosynovitis	0	0	2
Digital nerve injury	2	0	1
Extension lag	1	0	0

DISCUSSION:

The overall results indicate better outcomes in UPR and APR groups in terms of pain score, return to activities and post-procedural complications.

CONCLUSION:

A randomized-controlled trial is needed to ascertain the significance between open and minimal invasive trigger finger release based on the collective results postulating the advantages of the latter in treating trigger finger.

REFERENCES:

- Huang, HK et. al. J Hand Surg 2015; 40(7),735-739.
- Hansen RL et. al. J Hand Surg 2017; 42(5),359-366.

Table 1: Procedural outcomes of OR vs UPR vs APR for finger stenosing tenosynovitis