Journal of Population Therapeutics & Clinical Pharmacology

RESEARCH ARTICLE
DOI: 10.53555/jptcp.v31i7.7266

PERCUTANEOUS RELEASE OF TRIGGER FINGER WITH AND WITHOUT INJECTION TRIAMCINOLONE

Dr.Satish R.G[1*], Dr.Shiva Shankaran G.B[2], Dr.Vasanth Kumar C[3]

[1*]Post Graduate, M.S Orthopaedics, Sree Balaji Medical College and Hospital,Chennai.
ORCID ID:0009-0009-8128-1812
[2]Assistant Professor, Dept. of Orthopaedics, Sree Balaji Medical College and Hospital,Chennai
[3]Associate Professor, Dept. of Orthopaedics, Sree Balaji Medical College and Hospital,Chennai

[*]**Corresponding Author:** Dr.Satish R.G
*Post Graduate, M.S Orthopaedics, Sree Balaji Medical College and Hospital, Chennai.
ORCID ID:0009-0009-8128-1812

INTRODUCTION:

Trigger finger is the click sound with pain which happen when the patient flexes the fingers of the hand. Its due to the inflammation between the tendon and the sheath of the tendon. Its also called as Stenosing Teno-synovitis. The normal anatomical location the A1 Pulley it is under high pressure during normal gripping and power gripping. Pathophysiology is when there is friction and c tendon and sheath at A1 Pulley, there is proliferation of chondrocytes and production of type 3 collagen. Its usually presents in labourers who use tools, female predominance, higher in patients with Diabetes Mellitus,deQuervains,Renal diseases,Rheumatoid arthritis. Fourth digit is commonly involved followed by first and third digit. They have clinical features of Pain, Intermittent locking, Finally permanent locking of the digits. The patient can flex the digits but extension of the digits is difficult or sometimes impossible. Its usually a clinical diagnosis. Sometimes USG is helpful USG shows thickening and hypervascularization of the A1Pulley.Treatment consists of Non-operative and Operative treatment.Non-Operative methods are Activity modification, NSAIDS, Splints and Corticosteroid Injections.Operative procedures include Percutaneous release, Endoscopic release and Open release.In our study we do a Percutaneous release with and without Steroid injection.

MATERIALS&METHODS:

This is a prospective study, which includes 80 trigger fingers patients (52 men and 28 women).They are diagnosed clinically.No investigations are usually needed.All these patients underwent Procedure in Strict aseptic precautions in minor OT.Procedure done was Trigger finger(Percutaneous Needling) with 16G needle with or without Local Triamcinolone Injection.Pos-op the patient was put on oral antibiotics,pain killer medications and ice packs.The patients were followed up on 1 week and 4 week.

TECHNIQUE USED:

After getting informed consent from the patient,its done as a daycare procedure in Minor OT.Under strict aseptic precautions,Patient involved side hand and forearm id painted and draped.A local anaesthetic of 2ml of 2% Lignocaine and 3ml of Sterile water is injected at the nodular swelling of the affected digit.A 16G needle is inserted space between distal palmar crease and the metacarpo-phalyngeal joint crease over the nodule that is palpable at an angle of 45 degrees and the thickened

pulley is divided by the sharp end of the needle.Then after slight withdrawal of the needle from the tendon, administration of the drug Inj.Triamcinolone is done between the tendon and sheath.Imediately after the procedure is done the patient is painfree.

Patient Clinical features

CLINICAL FEATURES	NUMBER OF DIGITS INVOLVED
Pain with noduls	12
Locking	68
Contractures	0

Digits involved

FINGER INVOLVED	NUMBER
Thumb	10
Index	23
Middle	17
Ring	30

Quinnells Grading

GRADE	NUMBER
GRADE 1	12
GRADE 2	20
GRADE 3	48
GRADE 4	0

Patient Information

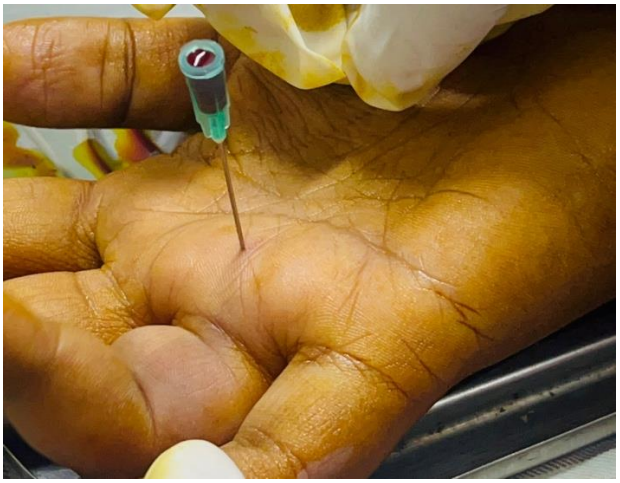
PATIENT CHARACTERISTICS	NUMBER
Mean age	40 years
Male : Female	28 : 52
Right hand : Left hand	56 : 24

RETURN TO ACTIVITIES	WITHOUT STEROID	WITH STEROID
Within 3 days	68	74
Within a week	12	6
More than a week	0	0

Error!

Table 1
Quinnell grading system

Grade 0	Pain with flexion, no mechanical symptoms
Grade 1	Uneven motion during flexion/clicking
Grade 2	Locked digit that is actively corrected
Grade 3	Locked digit that is passively corrected
Grade 4	Locked digit, uncorrectable/fixed flexion contracture



OUTCOMES	WEEK 1 WITHOUT STEROID	WEEK 1 WITH STEROID	WEEK 4 WITHOUT STEROID	WEEK 4 WITH STEROID
Objective outcome 1.Satisfactory 2.Unsatisfactory	 80 0	 80 0	 80 0	 80 0
Subjective outcome 1.Very Satisfactory 2.Satisfactory 3.Unsatisfactory	 45 35 0	 60 20 0	 58 22 0	 72 8 0
Complications 1.Pain 2.Erythema 3.Infection 4.Recurrence 5.Stiffness 6.Nerve damage	 9 15 0 0 6 0	 5 9 0 0 4 0	 0 0 0 0 0 0	 0 0 0 0 0 0

RESULTS:
All the patients underwent trigger finger percutaneous release with and without steroid injection. At the end of 4 weeks 72 of them had very satisfactory outcomes with steroid while only 58 had very satisfactory outcomes without steroid. At the end of 1st week 5 patients with steroid had pain whereas 9 patients had pain without steroids. At the end of 1st week 9 patients with steroid had Erythema whereas 15 patients had erythema without steroids. We did not encounter complications like infections.recurrence and nerve damage in both groups.So,Percutaneous release with needle and with Injection Triamcinolale have come out with good functional outcomes.

DISCUSSION: This procedure is nowadays quite commonly done as a day care procedure due to its excellent results and the patient goes painfree.This procedure is very affortable,done in opd settings,low complications and good outcomes.The Indications for Corticosteroid injections are mainly females with single digit involvementwith a short duration of symptoms with no associated Rheumatoid arthritis and Diabetes Mellitus.They are contraindicated in <18years and any previous surgery to the affected digit in the last 6 months.Side effects may include Flaring,Infection,Tendon rupture.Our study showed excellent functional outcomes which is similar to that of Ha KI et al study which had no complications in their study of 185 patients. Mishra et al study had no complications which is in par to our study.

CONCLUSION:igger finger Percutaneous Needleing with Injection of Triamcinolone is the safest procedure of choice in patients with triggering.Its highly recommended in patients suffering with locking and snapping for longer periods of time.Its highly affordable,safe,day care procedurelimited complications unlike open procedures,highly effective,patient goes home painfree and early return ro daily activities.

REFERENCES:

1. Hagen S. Surgery for trigger finger.*Hand Surg.* 2003; 8: 201-203
2. Pope D.F. Wolfe S.W. Safety and efficacy of percutaneous trigger finger release.*J Hand Surg Am.* 1995; 20: 280-283
3. Wolf J.M. Trigger digits: principles, management, andcomplications.*J Hand Surg Am.* 2006; 31: 135-146
4. Schuh A. Long-term results of surgical release of trigger finger and trigger thumb in adults.*Arch Orthop TraumaSurg.* 2009; 129: 1617-1619
5. Lim M.H. Lim K.K. Rasheed M.Z. Narayanan S. Beng-Hoi Tan A.Outcome of open trigger digit release.*J Hand SurgEur.* 2007; 32: 457-459
6. Morales L. Pans S. Paridaens R.et al.Debilitating musculoskeletal pain and stiffness with letrozole and exemestane: associated tenosynovial changes on magnetic resonance imaging.*Breast Cancer Res Treat.* 2007; 104: 87-91
7. Fabry G. Surgical treatment of trigger fingers.*Acta OrthopBel.* 1998; 64: 363-365
8. Will R.Lubahn J. Complications of open trigger finger release.*J Hand Surg Am.* 2010; 35: 594-596