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## Patient satisfaction on Trigger finger management

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### ABSTRACT

Trigger finger relatively a common hand problem with varied treatment options from conservative to surgical release done as outpatient and daycare procedure with its own applications and limitations. Our aim is to assess patient satisfaction among the different types of trigger finger release at different areas of health care. 60 patients (Female 60%: Male 40%) with single-digit trigger finger involvement (Ring finger 28.33%, Thumb 26.66%, Middle finger 25%, Index finger 18.33%) with a mean age of 49 years were divided into four groups based on card selection. The mean Short Assessment of Patient Satisfaction SAPS score was highest amongst the group in which the procedure was done at the outpatient area under percutaneous needle release technique, while the mean lowest score was obtained from group IV in which the procedure was done at the operation theatre by open release technique as daycare. Patient satisfaction and compliance were found to be higher in the group who underwent a procedure at an outpatient area.



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the fact that patients frequently credit it to abuse or redundant developments. The commonness of trigger finger is likewise higher among patients with diabetes mellitus, rheumatoid joint inflammation, or conditions that reason fundamental testimony of protein, for example, amyloidosis (Saldana, 2001). Treatment modalities of trigger finger varies from conservative treatment in the form of analgesics, splinting, steroid injection, physiotherapy to surgical intervention. The surgical release of a trigger can be open release or a percutaneous procedure. Our aim is to assess patients satisfaction amongst the different types of surgical release of trigger finger.

## INTRODUCTION

Trigger finger is a standout amongst the most widely recognized reasons for hand torment in grownups. The announced commonness is approximately 2 percent in the overall public, and is more typical among ladies than men in the fifth or 6th decade of life (Moore, 2000). Trigger finger is brought about by a divergence in the extent of the flexor ligaments and the encompassing retinacular pulley framework at the main annular (A1) pulley. The reason for trigger finger is most much of the time misty, despite

## MATERIALS AND METHODS

The study was conducted among the patients who visited orthopaedic and hand outpatient department of Sri Ramachandra Institute of higher education and research hospital between January 2018 to Jan 2019. It was a prospective randomised controlled study, inclusion criteria were patients with single trigger finger or thumb trigger, and exclusion criteria were patients with more than one trigger finger, bilateral hand involvement and failed percu-

taneous or open trigger release surgery done previously. Institutional clearance from the ethics committee was obtained prior to the start of the study. Informed consent were obtained, and patients were clearly explained about the study in detail. All the patients who took part in the study had already undergone conservative management and now willing for surgical release. We had sixty patients who took part in the study. Table 1 shows,

Patients were divided into four groups based on the intervention they undergone. Group I were patients who underwent percutaneous release under local anaesthesia at the outpatient area and Group II were patients who underwent open trigger release at the outpatient area while Group III and Group IV were patients who underwent percutaneous trigger release and open trigger release respectively as day-care procedure in operation theatre. Patients were allocated groups based on card selection.

All the procedures were done by a single senior orthopaedic consultant. Patients who underwent open procedure alone had a single dose of 3<sup>rd</sup> generation cephalosporin as intravenous infusion just before the skin incision. All the procedures were done under local anaesthesia only. Percutaneous release was done with 18 gauge 1.5-inch hypodermic needle. It was inserted in the region of the metacarpal head, flexor tendon felt, and needle slid along it till the proximal extent of A1 pulley was felt. The sharp edge of the needle was used to cut the A1 pulley from distal to proximal along the flexor tendon. Asking the patient to actively move the finger and check for persistent triggering assessed completeness (Ranjeet *et al.*, 2018; Hawthorne *et al.*, 2014). Post operatively adhesive dressing was used for two days, followed by active movements of a finger along with exercises using a hot water bath.

For open procedure 1 cm transverse incision was made over the metacarpophalangeal joint, by blunt dissection flexor tendon is identified; two retractors protected neurovascular bundles on either side of the tendon. A1 pulley identified transected from proximal to distal extent (Cakmak *et al.*, 2012; Will and Lubahn, 2010). Completeness was checked and skin was closed using a non-absorbable suture after giving a wash. Sterile dressing was applied, and patients were advised to return for suture removal after 1 week. Active mobilization was allowed as per the patient's tolerance.

Post-surgical intervention patients were given The Short Assessment of Patient Satisfaction (SAPS) questionnaire and were advised to mark as per their experience (Gilberts *et al.*, 2001). The standardised questionnaire was used as it has the same yardstick

to assess all patients. The use of such measures can provide effective feedback to clinicians concerning the patient's view of the effectiveness of their treatments, and can assist in identifying ways to improve practice and to address patient concerns. In general, SAPS scores can be interpreted as follows: Score 0 to 10 means Very dissatisfied, score 11 to 18 means Dissatisfied while score 19 to 26 means Satisfied and score 27 to 28 Very satisfied. The pain relief, follow up, a complication of the procedures were also noted but not elaborated as our main aim to look for only patient satisfaction. There is a column added to the existing questionnaire at the last about the patient's opinions and suggestion.

## RESULTS AND DISCUSSION

The mean SAPS score was highest amongst the group in which the procedure was done in an outpatient department under percutaneous release technique. While the mean lowest score was obtained from group IV in which the open procedure was done in Operation Theatre. Only forty-five patients had given suggestions while others left it blank. Table 2 shows,

Contentions over the predominance of open versus the percutaneous strategy have been continuing for quite a long time. The two sides have had their own investigations distributed, yet the prevalence of either system is yet over be affirmed, we are not interested in the outcome of these procedures. We want to focus only on the patient's satisfaction index following trigger release, either open or percutaneously in different areas of patients care. In our study, female population was found to be higher than the male population (Female 60 %: Male 40%) and the average mean age of the total patient population was 49. (Marij, 2017) in his series of 52 patients had a similar observation for gender and age (Trezies *et al.*, 1998). In our study, we observed the ring finger (28.33%) to be more commonly involved followed by thumb (26.66%), middle finger (25%) and index finger (18.33%). (Mohsen and Elsayed, 2013) in his study, reported 97% success rate of percutaneous release in 40 trigger digits, with the thumb being the most common digit (Saldana, 2001; Gilberts *et al.*, 2001). The dominance of the hand and triggering of digit involvement was not found significant in our study. (Trezies *et al.*, 1998) illustrated in his series of 178 patients with idiopathic trigger finger, concluded that vast major of trigger finger develops for reasons other than occupation Mohsen and Elsayed (2013). In our study, cost-effectiveness, adaptability and affordability for the procedure was found to be greater acceptance in

**Table 1: Demographic data of patients**

Groups	Gender	Finger	Mean Age
Group I	Male-06	Thumb-4 Ring-6	47
	Female-09	Middle-3 Index-2	54
Group II	Male-07	Thumb-5 Ring-3	51
	Female-08	Middle-4 Index-2	50
Group III	Male-05	Thumb-4 Ring-5	51
	Female-10	Middle-4 Index-3	41
Group IV	Male-06	Thumb-3 Ring-3	49
	Female-09	Middle-4 Index-5	51

**Table 2: Mean The Short Assessment of Patient Satisfaction (SAPS) questionnaire score**

Groups	No of Participants	Mean SAPS score
Group I	15	28
Group II	15	27
Group III	15	23
Group IV	15	21

Group 1 population, than the other groups. (Marij, 2017) observed PR trigger finger release as the outpatient procedure was found to be safe, cost-effective with significant patient satisfaction. (Cebesoy *et al.*, 2007) concluded percutaneous trigger thumb release found to be cheap, safe and effective with lower complications.

Eastwood *et al.* (1992) illustrated in his series of percutaneous trigger finger release as a convenient, cost-effective method becoming popular than open surgery. (Ha *et al.*, 2001) reported greater acceptance and compliance after their 185 percutaneous procedures. (Gilberts *et al.*, 2001) in his longterm comparative study, indicated outstanding results for both techniques (Gilberts *et al.*, 2001; Eastwood *et al.*, 1992; Ha *et al.*, 2001; Gilberts and Wereldsma, 2002; Marij, 2017; Cebesoy *et al.*, 2007).

In our study, we observed that procedure done at outpatient area requires less manpower for assistance (single nursing staff at outpatient area), less time consuming, low cost/affordable consumables

like syringe, needle and sterile gauze for dressing post-procedure, post-procedure observation at opd, medication slip and finally return back early to home within a period of two hours have a greater significant impact on patient acceptance and satisfaction, while amongst the procedures done at operation theatre needs greater manpower involvement from admission counter to daycare ward secretary in-charge, ward nursing staff care, preparation for procedure with checklist - ID band, paperwork involvement filling case sheets, reconciliation form, patient and family education chart, baseline blood investigations, OT booking form, besides all done allocation of theatre might take further longer hours of waiting period as to follow the conventional queue method. Inside operation theatre, monitoring equipments, more manpower needs - floor staff and scrub staff, consumables like sterile tray, autoclaved sterile instruments, disposable drape materials and post-procedural shifting area for observation then to respective ward and finally discharge with sum-

mary handed over with all discharge advice, medications and next review date which takes nearly the complete sunlight hours of the day. (Webb and Stothard, 2009) concluded outpatient procedure to be significant in cost savings over formal surgical treatment (Webb and Stothard, 2009).

Percutaneous trigger finger release with needle done as an outpatient procedure in the clinic area observed to have higher acceptance with patient satisfaction and financial ease and less time consuming than other procedures due to higher logistical needs.

## CONCLUSION

Patient satisfaction and compliance was found to be higher when the procedure is done at the outpatient area. Psychosocial evaluation and analysis of the individual subjective understanding of pathology behind the disease process of triggering and its treatment modalities might help in greater acceptance and compliance among patients and its outcome.

## REFERENCES

- Cakmak, F., Wolf, M. B., Bruckner, T., Hahn, P., Unglaub, F. 2012. Follow-up investigation of open trigger digit release. *Archives of Orthopaedic and Trauma Surgery*, 132(5):685–691.
- Cebesoy, O., Karakurum, G., Kose, K. C., Baltaci, E. T., Isik, M. 2007. Percutaneous release of the trigger thumb: is it safe, cheap and effective. *International orthopaedics*, 31(3):345–349.
- Eastwood, D. M., Gupta, K. J., Johnson, D. P. 1992. Percutaneous release of the trigger finger: An office procedure. *The Journal of Hand Surgery*, 17(1):90125–90134.
- Gilberts, E. C. A. M., Beekman, W. H., Stevens, H. J. P. D., Wereldsma, J. C. J. 2001. Pro-spective randomized trial of open versus percutaneous surgery for trigger digits. *The Journal of Hand Surgery*, 26(3):497–500.
- Gilberts, E. C. A. M., Wereldsma, J. C. J. 2002. Long-term results of percutaneous and open surgery for trigger fingers and thumbs. *International Surgery*, 87:48–52.
- Ha, K. I., Park, M. J., Ha, C. W. 2001. Percutaneous release of trigger digits. *The Journal of Bone and Joint Surgery. British*, (1):75–77.
- Hawthorne, G., Sansoni, J., Hayes, L., Marosszeky, N., Sansoni, E. 2014. Measuring patient satisfaction with health care treatment using the Short Assessment of Patient Satisfaction measure delivered superior and robust satisfaction estimates. *Journal of Clinical Epidemiology*, 67(5):527–537.
- Marij, Z. 2017. Outpatient Percutaneous Release of Trigger Finger: A Cost-Effective and Safe Procedure. *Malaysian Orthopaedic Journal*, 11(1):52–56.
- Mohsen, M., Elsayed 2013. Percutaneous release of trigger finger. *The Egyptian orthopaedic journal*, 48(3):277–281.
- Moore, J. S. 2000. Flexor tendon entrapment of the digits (trigger finger and trigger thumb). *Journal of Occupational and Environmental Medicine*, 42:526–526.
- Ranjeet, N., Sapkota, K., Thapa, P., Onta, P. R., Wahegoankar, K., Thapa, U. J., Shah, H. 2018. Trigger Finger: A Prospective Randomised Control Trial Comparing Percutaneous Release versus Open Release. *Journal of Clinical and Diagnostic Research*, (1):12–12.
- Saldana, M. J. 2001. Trigger digits: diagnosis and treatment. *J Am Acad Orthop Surg*, 9:246–246.
- Treziez, A. J. H., Lyons, A. R., Fielding, K., Davis, T. R. C. 1998. Is Occupation an Aetiological Factor in the Development of Trigger Finger? *Journal of Hand Surgery*, 23(4):80142–80145.
- Webb, J., Stothard, J. 2009. Cost Minimisation Using Clinic-Based Treatment for Common Hand Conditions - A Prospective Economic Analysis. *The Annals of The Royal College of Surgeons of England*. 91:135–139.
- Will, R., Lubahn, J. 2010. Complications of Open Trigger Finger Release. *The Journal of Hand Surgery*, 35:594–596.