

CLINICAL OUTCOME OF PREOPERATIVE PHYSIOTHERAPY ON POSTOPERATIVE TRIGGER FINGER RELEASE FINGER FUNCTIONAL RECOVERY

Jeffrey S, Abdullah Aqeel M, Andrew Mak SK, Anthony M, Arief Y, Saravanan A, Mohd Ashraf AM, Nur Atiqah MJ, Farid M, Syahril Rizal A, Kamarul Al-Haqq AG
Orthopaedic and Traumatology, Hospital Tengku Ampuan Rahimah Klang

INTRODUCTION:

Trigger finger is caused by thickening of A1 pulley which restricts flexor tendon gliding. Patients with grade 3 trigger finger require surgical intervention¹. This study was conducted to determine if preoperative physiotherapy in patients with grade 3 trigger finger could improve their postoperative finger functional recovery.

METHODS:

In this prospective study, patients with grade 3 trigger finger receiving treatment at our centre between January to December 2018 were selected. Patients with trigger thumb, hand deformity, neurological deficit, previous hand surgery, multiple trigger finger or joint arthritis were excluded. Patient demographic data were obtained. Patients were randomly allocated into group 1(preoperative physiotherapy) or group 2(no preoperative physiotherapy). All patients underwent open A1 pulley trigger finger release. Postoperative active finger flexion range of motion and QuickDASH score were measured at 2 weeks and 8 weeks follow up. Data obtained were analysed using SPSS.

RESULTS:

32 patients were selected. The average age was 54 years(range 34-71). Most of the patients were female and had middle finger trigger finger. Both groups had no significant differences in patient demographic distribution. There was a higher degree of active finger flexion at the metacarpophalangeal, proximal interphalangeal and distal interphalangeal joint in group 1 patients compared to group 2. Group 1 patients also showed a better QuickDASH score at both follow ups but it was not statistically significant.

DISCUSSIONS:

Trigger finger patients with finger locking symptoms during active flexion requiring passive manual finger extension(grade 3) need surgical intervention¹. The benefits of preoperative physiotherapy on the postoperative finger functional recovery have not been studied before.

Table 1 showing patient demography and postoperative outcome

Variables (n= 32)	Group 1 (n= 16)	Group 2 (n=16)	p value
	Mean +/- SD	Mean +/- SD	
Age (Yr)	53.25+/-9.18	55.06+/-8.87	0.822
Gender			
Male	2	6	0.102
Female	14	10	
Race			
Malay	7	7	0.234
Chinese	4	3	
Indian	5	6	
Trigger finger			
Index	2	3	0.667
Middle	7	8	
Ring	6	4	
Little	1	1	
Active Finger Flexion Range of Motion at 2 weeks			
MCPJ	77.94+/-19.2	62.69+/-24.71	0.061
PIPJ	88.5+/-14.62	80.0+/-17.13	0.142
DIPJ	78.5+/-18.97	65.44+/-22.48	0.086
Active Finger Flexion Range of Motion at 8 weeks			
MCPJ	87.38+/-7.89	85.13+/-11.48	0.523
PIPJ	97.75+/-6.19	94.88+/-8.09	0.268
DIPJ	88.75+/-3.72	85.88+/-9.22	0.257
QuickDASH			
2 weeks	17.04+/-17.85	21.70+/-19.03	0.481
8 weeks	3.27+/-8.23	9.09+/-11.37	0.108

Trigger finger physiotherapy regiment consists of heat therapy, massage, joint stretching and mobilization¹. Massaging reduces the tissue bulk whilst heat therapy increases blood flow and collagen extensibility to the affected finger thus reducing oedema, joint stiffness and pain¹. Stretching and joint mobilization, increases tendon translational gliding thus it increases joint motion¹. We postulate that, these factors had contributed to the enhanced postoperative trigger finger functional recovery seen in patients who underwent preoperative physiotherapy.

CONCLUSION:

Preoperative trigger finger physiotherapy improves postoperative trigger finger release finger functional recovery.

REFERENCES:

1. N. Salim et al. Outcome of corticosteroid injection vs physiotherapy in the treatment of mild trigger fingers. *J Hand Surg Eur Vol* 2012 37:27.