ORIGINAL ARTICLE

Is surgical release of de Quervain tenosynovitis good option?

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Abstract

Purpose: The purpose of my study was to evaluate the outcome of surgical release which results in early pain relief and lifelong exemption from recurrence

Materials and Methods: 40 patients presenting to Baqai University Fatima Hospital, Karachi, Pakistan with de Quervain Tenosynovitis from November 2016 to June 2017 were evaluated in a retrospective manner, all patients had positive Finkelstein test and tenderness over 1st extensor compartment, Visual Analog Score (VAS) was calculated and surgical release was done under local anesthesia with a 1-2 cm incision over point of maximum tenderness over 1st extensor compartment. The extensor retinaculum which covers the Extensor Pollicis Brevis (EPB) tendon was incised by a longitudinal incision. Overlying skin was closed using interrupted sutures. Post-operative Visual Analog Score and Finkelstein test were assessed after 6 months.

Results: 40 patients were included in the study, 35 were females (87%) 5 were males (12.5%). 2 patients were lost follow-up (5%). 38 patients (95%) had disease in their right hand while 2 patients (5%) had disease in their left hand. Average VAS score pre-operative was 7.8. All patients had Finkelstein test positive. Post-operative VAS score was 1.7. All patients had Finkelstein test negative post-procedure. 1 patient (2.5%) had surgical site infection (SSI). 2 patients (5%) had sensory loss over surgical site.

Conclusions: We conclude that surgical release for dequarvain tenosynovitis is a safe and reliable method of treatment

Keywords: de Quarvain tenosynovitis, Finkelstein test, Visual analogue score (VAS), surgical site infection

Introduction:

de Quervain disease is also called stenosing tenosynovitis of the abductor pollicis longus (APL) and the extensor pollicis brevis (EPB). It is located within the extensor compartment of the wrist. This disease is caused by repetitive and continuous strain of abductor pollicis longus and extensor pollicis brevis tendons when they are passed under the inflamed extensor retinaculum. Women are more commonly involved as compared to men. Symptoms include pain and inflammation around styloid process of radius. The pain is exaggerated by restricted movement of thumb and activity requiring ulnar deviation when the wrist is clenched and thumb flexed.

Treatment other than surgery includes non steroidal anti inflammatory medications, steroids and splinting. If conservative treatment like immobilization by splint, physiotherapy and rehabilitation fails then steroids are injected into the tendon sheaths, but it might take about 18 months to resolve the symptoms, however steroids injections can cause side effects like atrophy of the subcutaneous tissue as well as tendon rupture. Patients who don't respond to repeated steroid injections are referred for surgery like decompression of the first dorsal compartment.

The aim of our surgical study was to see whether early release of de Quervain Tenosynovitis re-

Figure-1: Isolation of tendons in de-Quarvain tenosynovitis

Figure-2: Post-operative scar

sults in better pain and disease control.

Materials and methods:

From November 2016 to June 2017, we evaluated 40 patients (5 men and 35 women) in a retrospective manner. Patient who presented in the OPD with signs and symptoms of de Quervain's disease which including positive Finkelstein tests and localized first dorsal compartment tenderness were including in the study. All cases were done under sterile and aseptic conditions in the OT, local anesthesia was used which include lidocaine, 1-2cm incision was made over maximum point of tenderness over the 1st extensor compartment of the affected thumb. Radial nerve and its branches were identified and preserved. Hemostasis was secured and inflamed sheath was exposed. The Extensor Pollicis Brevis tendon was identified just distal to the extensor compartment, then extensor pollicis brevis was covered by extensor retinaculum which was incised over the extensor pollicis brevis tendon. After the incision over the tendon the skin was closed with the help of sutures and dressing was done. Prior written and informed consent was taken from all patients. All the cases were done by a single surgeon having more than 5 years experience. We analyzed pre and post-operative Visual Analog Score (VAS) and Flinkinstein test pre and post-operatively. Patients were asked to follow-up at 2nd week, 6th weeks, and 6 months. 6 months after surgery all patients were given VAS score and clinically flinkinsten test was done to assess outcome.

Inclusion criteria:

- All patients who failed the conservative treatment for more than six weeks were included in the study
- Patients with age more than 35 years old
- Patients with positive Finkelstein test
- Patients with VAS score greater than 7

Exclusion criteria:

- Patients with the history of steroid injections for this disease
- Patients with history of Diabetes Mellitus
- Patients with history of wrist fractures
- Patients above 60 years old

Results:

40 patients were included in the study, 35 were females (87%) 5 were males (12.5%). 2 patients were lost during the follow-up (5%). 38 patients (95%) had disease in their Right hand while 2 patients (5%) had disease in their left hand. Average VAS score pre-operative was 7.8. All patients had flinkinstein test positive. Post-operative VAS score was 1.7. All patients had flinkinstein test negative post-procedure. 1 patient (2.5%) had surgical site infection. 2 patients (5%) had sensory loss over surgical site. Out of 45 patients, 3 patients still had positive Finkelstein test at the follow up, 2 of them reported that the symptom's severity were improved after surgery while 1 patient reported about pain and swelling in the hand after playing tennis

Discussion:

In our study we achieved excellent results in patients who were treated surgically for the release of 1st extensor compartment; patients became symptom free with negative finkenstein test in the follow up after 6 weeks and 6 months.

A similar study was done by SchellerA et all on long term results of surgical release of de Quervains disease on 94 patients, all were completely relieved of their symptoms after surgical pro-

cedure including a negative flinkinstein test on their follow up.

A study was done from 2003 to 2009 by HJ Lee et al[1] on 33 patients, it was concluded that de Quervain disease is caused by intercompartmental ganglia[7-9] and separate septum of extensor policis brevis tendon and surgical release of 1st extensor compartment was related to good prognosis. However in our study we didn't find any intercompartmental ganglia

Tan MY[9] founded a ganglia over the 1st extensor compartment in 8 patients and when he resected the ganglia the patient became symptom free in the follow up though ganglia is unrelated to de Quervain disease but in that case the ganglia was causing tenosynovitis

Single case study of a female patient who failed to respond to conservative treatments like NSAIDs, Corticosteroids and splinting after was referred for surgical treatment of 1st dorsal compartment by R Goel 2014, patient was provided splinting after the surgery and referred to Occupational therapy she was symptom free after 6 weeks post surgery.[2-6]

A retrospective study in 45 patients shows failure of conservative management and operative decompression followed by pulley reconstruction was done by J V D Wijk[10] which improved long term symptoms outcome

There is limited literature available whether results of surgical release for dequarvains tenosynovitis in Asian population results in good outcome.

Limitations of study: This study was a uni-centric study

The number of patients were less. The study was retrospective

Conclusion:

We conclude that surgical release for dequarvain tenosynovitis is a safe and reliable method of treatment

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Role and contribution of authors:

Dr Nasir Yaqoob, collected the data and references and wrote the initial write-up.

Dr Syed Danish Ali, collected the data and references and helped in introduction writing.

Dr Salman Adil, collected the references and helped in discussion writing.

Dr Osama Ahmed Qureshi, interpreted the data and helped in discussion writing.

Dr Hareem Azam, collected the data

Dr Bassil Azam, Collected the data

Dr Aslam Siddiqui, critically review the article and made final changes.

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