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Research Article

**A CROSS-SECTIONAL ASSESSMENT OF THE DE-QUERVAIN
DISORDER SURGICAL TREATMENT OUTCOMES AT
SERVICES HOSPITAL, LAHORE**

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Abstract:

Background: Patients are remarkably suffered from De-Quervain's disorder and found with pain.

Objective: To determine the result of De-Quervain's disorder when treated, was the main objective of this study.

Material and Methods: This research was carried out at Services Hospital, Lahore from February 2017 to March 2018. The patients selected for this research were found with De-Quervain's disorder. These patients did not react to conservative management with splintage, local steroid injections and analgesics for four to six months. These patients were treated under local anaesthesia. Different segments were made for tendons of abductor pollicis longus and extensor pollicis brevis. In order to examine the results of this technique, patients were followed for about four months. SPSS was used for data entry and assessment.

Results: Total patients enrolled in this study were twenty in number. Male to female ration was (8:1). The mean age of female patients was 39 years. The age bracket was from 35 – 50 years. All females were found housewives and associated and with manual work. Rheumatoid arthritis was present in four females. The patients found symptomless after surgical treatment was 94%.

Conclusion: In patients having regular De-Quervain's disorder, amazing outcomes has been noticed related to the surgical release of the first dorsal compartment (abductor pollicis longus and extensor pollicis brevis) of the wrist.

Keywords: De-Quervains, Disorder, Surgical, Management and Analgesic.

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INTRODUCTION:

Two reasons are associated with De-Quervain's. These reasons include extensor pollicis brevis in the first dorsal compartment of the wrist and stenosing tenosynovitis of abductor pollicis longus. Six segments are made for extensor retinaculum of the wrist. Tendons are transferred into the hand and fingers by means of these segments. Regular trauma can lead to synovitis or it can occur idiopathically. Segments could shrink and secondary thickening of tendon sheaths can occur due to the inflammatory process. In approximately 75% of the patients, the disorder can be prevented in further advancement by treating the disorder in time with local steroids, splintage and rest [1]. The patients of age between 30 – 50 years are more vulnerable to the disease. As compare to male's disease mostly affects the females. Tenderness and discomfort are the most observed issues [2]. By employing the Finkel stein test, it can be affirmed clinically. Irritated pain is felt by the patient. In the first dorsal segment, anatomical changes are commonly observed in patients who do not react to treatment. There is a requirement of divisions of both segments of the patient on an individual basis. It is due to the fact that there is a chance of aberrant or replicated tendons or separate segments for the tendons [3, 4]. Steroid injection, pharmacotherapy, operation and immobilization are some techniques used for management of the disease [5]. The patients who did not react to management for four to six months, these patients are managed with surgery [6]. To determine the result of De-Quervain's disorder when treated, was the main objective of this study.

MATERIAL AND METHODS:

This research was carried out at Services Hospital, Lahore from February 2017 to March 2018. The patients selected for this research were found with De-Quervain's disorder. These patients did not react to conservative management with splintage, local steroid injections and analgesics for four to six months. These patients were treated under local anaesthesia. Different segments were made for tendons of abductor pollicis longus and extensor pollicis brevis. In the region like lateral epicondylitis of humerus, skin lesions, rotator cuff lesion or cervical radiculopathy, pathologies are

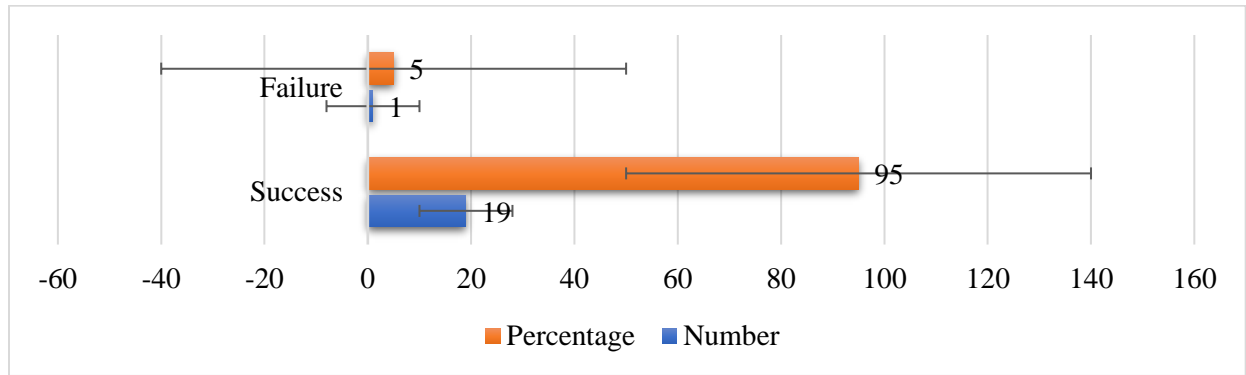
observed, such patients are expelled from the research. In order to examine the results of this technique, patients were followed for about four months. Those patients were also excluded who were not satisfied with surgery. The patients included in the study those who were identified with De-Quervain's disorder in which management was not productive. All the patients signed the written agreement. Age, gender, the time period of disorder, associated region, affected side and previous treatment was the information collected from patients. Discomfort, restlessness, level of job and Finkle stein test was examined before and after the operation. Local anaesthesia was used for carrying out the surgery. The first dorsal segment was opened and tendons were marked. Tendons were released, the skin was closed and the dressing was completed. The dressing was removed after 48 hours. For 3 to 5 days, analgesics and antibiotics were suggested. To determine the outcomes of surgery, all the patients were followed for six months. SPSS was used for data entry and assessment.

RESULTS:

Total patients enrolled for this study were twenty in number. Male to female ration was (8:1). The mean age of female patients was 39 years. The age bracket was from 35 – 50 years. All females were found housewives and associated and with manual work. Rheumatoid arthritis was present in four females. The patients found symptomless after surgical treatment was 94%. In all the patients' dominant right hand was involved. No patient was found with the bilateral association. Replication of extensor pollicis brevis was observed in one patient. In all the patients, thickening of the tendon sheath was observed. There were individual tunnels for abductor pollicis longus and extensor pollicis brevis on an exploration of the first dorsal tunnel in one patient. The patients found symptomless after surgical treatment was 94%. Just one patient was found with continuous pain in the region of anatomical snuffbox. In one patient, transient parenthesis was found. It recovered within three weeks. Otherwise, no complexities were observed. All the patients were satisfied with the outcomes of surgery except one.

Table: Outcomes of the Surgery

Surgery Outcomes	Number	Percentage
Success	19	95
Failure	1	5



DISCUSSION:

Manual workers are usually more vulnerable to De-Quervain's tenosynovitis. It is associated with the musculoskeletal disease. In our study, the ratio of male to female was (8:1). This ratio is comparable with other studies [7, 8]. Another study was conducted by Zarin and Ahmad in which (9:1) was female to male ratio in their study [9]. In 2007, a study was organized by Bouras Y et al. according to this study, more than one tendon is observed in 89% of cadaver's abductor pollicis long [10]. The age bracket of patients was between 35 – 50 years. It was observed during a surgical operation that one patient had a replicate of abductor pollicis long. In 77% of the patients, changes of replication of tendons of the first dorsal compartment were observed by Kulthanan and Chareonwat [11]. Except for one patient, all patients were found negative in Finkle Stein test. One patient was noticed with transient local anaesthesia in the follow-up period. No history of pain was observed in any patient. If the following suggestions are followed, they will help in preventing continuation and complete relief after surgery is evident.

- (1) During surgical operation and release, detachment should be done for the superficial branch of the radial nerve [12].
- (2) In order to prevent volar subluxation of tendons of the first dorsal segment, the tendon sheath should be set free as little as possible [13].
- (3) During surgery, identification of aberrant tendons should be made. Their sheath should be delivered in individual segments [14].
- (4) To prevent hypertrophic scar development, the transverse incision should be made commonly.

Thickening of the tendon sheath was a valuable result in all the patients. The cosmetic findings were also acceptable. In order to prevent regularity, different methods have been used by different authors [16, 17]. Relief of pain and patient's contentment was (80 – 90) percent in the older research studies. These results are

similar to the findings of surgery in De-Quervain's disorder of the current study [18, 19]. All the patients were well pleased with the outcomes of surgery except one patient [20, 21].

CONCLUSION:

It is concluded by the results that as compare to males, females are more vulnerable to De-Quervain's disorder. It was also noticed that outcomes of surgical release of a first dorsal segment of the wrist are brilliant. Patients who do not react to conservative management for four to six months, surgery should be planned for such cases.

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