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Research Article

**ROLE OF CORTICOSTEROID INJECTIONS IN THE
TREATMENT OF DE QUERVAIN'S TENOSYNOVITIS**Dr Muaaz Akram¹, Dr Zahra Ali², Dr Farhan Ahmad¹¹Shalamar Hospital Lahore²Ghurki Trust and Teaching Hospital Lahore

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Abstract:

Introduction: De Quervain's tenosynovitis is a stenosing tenosynovitis of the first dorsal compartment of the wrist, caused by impaired gliding of the abductor pollicis longus and extensor pollicis brevis tendons. **Aims and objectives:** The basic aim of the study is to find the role of corticosteroid injections in the treatment of De Quervain's Tenosynovitis. **Methodology of the study:** This cross sectional study was done in Shalamar hospital Lahore during June 2019 to November 2019. A total of 40 patients were registered in the study. All patients previously had a mean of 6 weeks (range 4-8 weeks) of treatment of the condition with oral and local NSAIDs and had shown no response and were therefore not satisfied with treatment. **Results:** Out of a total of 40 patients, 24(30%) were men and 26(70%) were women. The age ranged between 20 to 40 years. (Mean age 29.32 Years SD ±6.099). The right hand was affected in 48 (60%) and left in 32 (40%) patients. The mean duration from the onset of symptoms to enrolment for this study was 5.87 weeks (range 4 weeks to 8 weeks SD ±0.527). **Conclusion:** It is concluded that one or two local steroid injections in the first dorsal compartment leads to early improvement in patients with de Quervain's tenosynovitis.

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INTRODUCTION:

De Quervain's tenosynovitis is a stenosing tenosynovitis of the first dorsal compartment of the wrist, caused by impaired gliding of the abductor pollicis longus and extensor pollicis brevis tendons. The condition is probably caused by thickening of the ligamentous structures covering the tendons of the first dorsal compartment of the wrist. The name De Quervain's tenosynovitis given is after the name of Swiss surgeon Fritz de Quervain who mentioned it in 1895 for the first time and reported five cases and later eight cases in 1912 [1]. The first article on de Quervain's was published in American literature in 1989 by Hoffmann who was a surgeon. The condition De Quervain's disease is referred for the first time in an article which was read at the New England Surgical Society in 1936 by the surgeon Patterson at Bridgeport Hospital [2]. In distal upper limb deformity the most second common entrapment tendinitis is de Quervain's and the most common is trigger digit, although it occurs 20 times less as to that trigger digit. The degeneration is myxoid and fibrocartilaginous in type. The accumulation of mucopolysaccharide is also seen. The prevalence of the condition in United Kingdom is reported around 0.5% in men and 1.3% in women [3]. The history and clinical examination can easily diagnose the condition. Patient reports with pain at the site of radial styloid, clinical examination reveals local tenderness, and local swelling in some cases. Finkelstein's test is positive in typical cases. The Finkelstein test is performed by asking the patient to clench the fist with the thumb inside and at the same time deviating the hand towards the ulnar side [4].

Aims and objectives

The basic aim of the study is to find the role of corticosteroid injections in the treatment of De Quervain's Tenosynovitis.

METHODOLOGY OF THE STUDY:

This cross-sectional study was done in Shalamar hospital Lahore during June 2019 to November 2019.

Data collection

A total of 40 patients were registered in the study. All patients previously had a mean of 6 weeks (range 4-8 weeks) of treatment of the condition with oral and local NSAIDs and had shown no response and were therefore not satisfied with treatment. On physical examination the area at and around the radial styloid (first dorsal compartment of wrist) was tender, and the Finkelstein test was positive in all patients. The severity of pain was noted on Visual analogue scale, (VAS 0-10), with 0 no pain, 1 to 3 as mild, 4 to 6 as moderate and 7 to 10 as severe pain.

One ml (10mg) of triamcinolone acetonide and 1 ml of 1% lidocaine hydrochloride was taken and mixed in 5 cc syringe with 24 or 26 gauge needles. The area of tenderness was confirmed before injection. The needle was passed in the first extensor compartment of wrist, directing proximally towards the styloid process of radius and parallel to the abductor pollicis longus and extensor pollicis brevis tendons.

Statistical analysis

A chi-square test was used to examine the difference in the distribution of the fracture modes (SPSS 19.0 for Windows, SPSS Inc., USA).

RESULTS:

Out of a total of 40 patients, 24(30%) were men and 26(70%) were women. The age ranged between 20 to 40 years. (Mean age 29.32 Years SD \pm 6.099). The right hand was affected in 48 (60%) and left in 32 (40%) patients. The mean duration from the onset of symptoms to enrolment for this study was 5.87 weeks (range 4 weeks to 8 weeks SD \pm 0.527). At the start of study the severity of pain on 10cm VAS was recorded. 32 patients had VAS score eight, 25 patients had six and 23 patients had four. At four weeks, 24 (80%) out of 40 patients were symptoms free and completely satisfied with treatment with zero VAS

Table 01: Descriptive statistics of patients

	Age	Gender	Duration symptoms: Weeks 4-8	Pain score at start VAS: 1-10	Pain score at 4 weeks 6/8	Adverse reactions 25/80
N	Valid Missing	80 0	80 0	80 0	80 0	80 0
Mean	29.3250	1.7250	1.7250	6.2250	1.3500	2.0625
Std. Error of Mean	0.68200	0.05893	0.05893	0.18485	0.05366	0.11015
Median	29.0000	2.0000	2.0000	6.0000	1.0000	2.0000
Mode	24.00	2.00	2.00	8.00	1.00	2.00
Std. Deviation	6.09996	5.2711	0.52711	1.65334	4.7998	0.98526
Variance	37.209	2.78	0.278	2.734	2.30	0.971
Range	20.00	3.00	3.00	4.00	1.00	3.00
Minimum	20.00	1.00	1.00	4.00	1.00	1.00
Maximum	40.00	4.00	4.00	8.00	2.00	4.00

DISCUSSION:

All of our patients had previously tried other form of treatment (rest and oral NSAID's). Topical Local steroid injection is now accepted as standard treatment for DeQuervain ds. High level of success has been reported for local steroid injection in various studies. Richie and Eriner reviewed seven papers and concluded that local steroid injection is effective in 83% of patients. This cure rate was 61% for patients receiving injection and splint, and 14% for patients with splint only and it was 0% for those receiving rest or nonsteroid anti-inflammatory drugs [5]. It was found to be the most effective and successful treatment for this condition. In their analysis it was noticed that 327 wrists were injected and followed up for 9.6 months and no tendon rupture was found. Avciet al claimed 100% success rate [6,7]. Takuya Sawaizumi, (2007) performed local injections of Triamcinolone for patients with De Quervain's disease, and they claimed 94% success rate. 90% of patients were fully satisfied, relapse was seen in 26% of patients, and complications were seen in 32%. In this study all patients were satisfied up to 24 weeks follow-up, and we observed no recurrence [8].

CONCLUSION:

It is concluded that one or two local steroid injections in the first dorsal compartment leads to early improvement in patients with de Quervain's tenosynovitis.

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