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De Quervain's disease treatment in AL-Muthana city

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Abstract
A retrospective study of eighty-two wrists in seventy-eight consecutive patients with De Quervain's disease were treated in AL-Muthana city between 1st January 2019 and 1st January 2025.
In our study, the disease was found to be more in female (83.3%) and it's increas in association with diabetes mellitus (19.2%) raise the suspension of hormonal etiology in nature but the exact cause is not settled.
De Quervain's disease is rare in children (6.4%) in this study but there is no age group immune against this disease.
From this study appear to suggest that local steroid injection and thumb Spica for 3-4 weeks is recommended as first line of treatment whle surgery is reserved for cases which shows no response to the conservative methods or shows improvement but recurrence occurs later.

Keywords: De Quervain's disease, first dorsal compartment, local steroid injection, finkestein test

Introduction
De Quervian's disease is a condition that affects the tendons that control the movement of the thumbs, specifically the abductor pollicis longus (APL) and extensor pollicis brevis (EPB) [1].
Fritz De Quervian first postulated stenosing tenosynovitis in 1895 within the radial dorsum of the wrist, but its exact etiology remains the subject of debate [2].
It typically affects adults, most commonly women between 30 and 50 years of age. However, it can also occur in men and women of any age group who engage in activities that strain the tendons in the wrist and hand, such as playing sports or using hand tools for extended periods [2, 3].
The condition typically causes pain and tenderness on the lateral side of the wrist and may radiate up the forearm. Patients may also experience swelling and difficulty moving the thumb or grasping objects [1, 2, 3, 4].
Activities that involve repetitive hand and wrist movements, such as grasping, twisting, or pinching, can aggravate the condition [4, 5].
The treatment methods include nonsurgical approaches (physical therapy, corticosteroid injections, splintage, and therapeutic ultrasound) and surgery if symptoms fail to subside by conservative methods [3, 4, 5].

Patients and Methods
Eighty-two wrists in 78 consecutive patients with De Quervian's were treated in Al Samawa City between January 1, 2019, and January 1, 2025, as outpatients using non-surgical approaches, including splintage, activity modification, and NSAIDs for 3-6 weeks.
Diagnosis of the condition was usually made based on clinical data (history and examination); advanced imaging was not necessary. All patients had pain, local tenderness, swelling on the dorsoradial aspect of their wrist, and a positive Finkelstein test.
Failure of conservative treatment, and patients still complain after six weeks, then we proceed with a single local steroid injection and thumb spica for 3-4 weeks (1% Xylocaine 1 cc + 40 mg methylprednisolone in the first dorsal compartment). If there is no response and the patient is still complaining during clinical assessment, and the condition interferes with the patient's daily activity, we switch to surgical methods
Follow-up period extended monthly for the first six months and then annually thereafter for 1-5 years. Any patients who show no improvement after 3 months with non-surgical

methods or show improvement but recurrence one year later, surgical treatment was performed

Results: In our study, patients' ages ranged from 10 to 70 years. The most frequently affected age groups were found between 20 and 50 years in 59 (75.6%), as shown in Tab-1.

Table 1: Distribution of age group among the patients

Age	Case number	Percentage
10-19 years	5	6.4%
20-29 years	22	28.2%
30-39 years	23	29.5%
40-49 years	14	17.9%
50-59 years	10	12.8%
60-70 years	4	5.1%

We found 83.3% of women affected by De Quervians disease in this study as shown in table 2.

Table 2: Distribution of the patients according to sex

Sex	Case number	Percentage
Female	65	83.3%
Male	13	16.7%
Total	78	100%

In this paper, bilateral wrist was affected in 4 patients (5.1%) as shown in Table 3.

Table 3: Distribution of disease according to side.

Side	Wrist number	Patients number
Right	32(39%)	32(41%)
Left	42(51.2%)	42(53%)
Bilateral	6(9.7%)	4(5.1%)
Total	82	78

Dominant hand affected in 50 cases (59.5%) with a range of our patients' sample ages (10-70) mean age 37.14 as shown in Table 4.

Table 4: Demographic data of cases included in this study

Variable	Total and ranges
Total number of patients	78
Total number of wrists	82
Mean age (years)	37.14(10-70)
Number of women	65(83.3%)
Number of patients with dominant hand affected	50(59.5%)
Follow up (months)	6-72
Quantity of methylprednisolone injected (mg)	40mg

Most common associated disease is diabetes mellitus in 15(19.2%) as shown in table 5.

Table 5: Distribution of the sample according to associated disease.

Associated disease	Case number	Percentage
Hypertension	14	17.9%
Diabetes mellitus	15	19.2%
Carpaltunnelsyndrome	5	6.4%
Anemia	1	1.3%
CVA	1	1.3%
Gout	1	1.3%
Eczema	1	1.3%
Trigger finger	1	2.8%
Rheumatoid arthritis	1	1.3%

Non-surgical modalities of treatment show improvement in 92.3% of cases in-this study while local steroid injection and thumb spica alone show 84.6% improvement with 2 cases had hypopigmentation of skin at site of injection. Surgical treatment showed complete recovery in all cases (six) which were subjected to operation under different modalities of anesthesia (general, local and regional) without complications such as wound infection, superficial radial nerve injury, tendon subluxation and tendon injury.

Discussion: De Quervian's disease is a wrist pathology affecting the EPB and APL tendons of the first dorsal extensor compartment of the wrist. It is characterized by thickening of the extensor reticularis, resulting in excessive friction and radial side pain with extension and abduction of the thumb [1].

Disease prevalence is high in females with approximately 1.3% of the population affected, in comparison with 0.5% in men. The female-to-male ratio is 6:1, while our study nearly the same ratio was 5:1 [2, 3, 4, 5].

The condition is commonly associated with chronic overuse of the wrist and is related to the following risk factors: age (between 30 and 50 years) in our study, equal to 59% (75.6%) between ages 20 and 50. This increase, compared to another study that showed 47.5%, is due to our locality being a younger age group; sex (more common in women, 78.8%), equal to (83.3%) in this paper; pregnancy and care of newborns; and jobs or activities that involve constant use of the wrist [3, 4, 5].

In children, the disease is rare, but they can be affected, and they have the same symptoms and signs as in adults, and the treatment is also the same. Five cases were reported in this study (6.4%). Remember, there is no age group immune to this disease [6].

Bilateral De Quervian's disease percentage is not known, but in our study it was found in 4 patients (5.1%), while the dominant hand was affected more than the non-dominant one (60.4%) in our paper as in our study, which showed the same result (59.5%) [7, 8].

The most common non-surgical treatment methods are activity modification NSAIDs, thumb splinting, and local steroid injection into the first dorsal compartment. Although local steroid injection into the first dorsal compartment became available in the 1950s under direct visualization into the synovial sheath, symptomatic relief has been demonstrated in many studies ranging from 74% to 93%. In our study, we found that 84.6% of our patients treated under the direct visualization technique with a single local injection of methylprednisolone (40 mg and 1% 1 cc Xylocaine) in addition to thumb spica for 3-4 weeks were shown recovery [9, 10].

Surgical methods were performed for only six patients (7.7%) under different modalities of anesthesia (general, local, and regional). All patients were female and showed complete recovery from the symptoms with no complications. These six women had associated conditions (three DM, two hypertension, and one carpal tunnel syndrome). The most common associated disease was diabetes mellitus, found in fifteen (19.2%), and these findings are the same as in other researches [11, 12, 13, 14].

De Quervian's disease was found to be more common in females, and its increase in association with diabetes mellitus raises the suspicion of hormonal etiology in nature, but the exact cause has not been settled [15, 16].

Conclusion: From this retrospective study, it appears to suggest that local steroid injection and thumb spica for 3-4 weeks is recommended as the first line of treatment, while surgery is reserved for cases that show no response to non-surgical methods or showed improvement but recurrence occurs later.

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