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De Quervain's tendonitis of bilateral thumbs

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Abstract
Introduction: De Quervain's tenosynovitis is a condition affecting the wrist, resulting from inflammation between the tendons of the abductor pollicis longus and extensor pollicis brevis muscles and the osteofibrous tunnel in the first dorsal compartment of the wrist. It usually occurs in cases of microtrauma and also in women in the last trimester of pregnancy, postpartum, and during menopause.
Observation: We report the case of a 36-year-old woman who presented in April 2021 with pain on the outer edge of both wrists at the base of the thumbs. An ultrasound was performed and revealed bilateral tenosynovitis of the long abductor and short extensor tendons of the first finger. Medical treatment was initiated and the outcome was favorable.
Discussion: De Quervain's tenosynovitis, formerly known as crepitant peritendinitis, affects both sexes between the ages of 40 and 50, with a predominance in women. The diagnosis of tendinitis or tenosynovitis is essentially clinical and can be confirmed by ultrasound if necessary. In most cases, treatment is medical, with surgery being used if medical treatment fails.

Keywords: De Quervain's Tendonitis, bilateral thumbs, medical treatment fails

Introduction
De Quervain's tenosynovitis is the result of a nociceptive inflammatory process affecting the tendons of the abductor pollicis longus and extensor pollicis brevis muscles and their synovial sheaths [1]. This condition was first reported by Tillaux in 1892 [2]. It was then described by Fritz De Quervain in 1985 [3].
It is the most common form of tenosynovitis affecting the dorsal sheaths of the wrist tendons. However, bilateral De Quervain's tenosynovitis of the tendons following childbirth remains a rare condition, the progression of which can prevent any professional activity.

Observation
We report the case of a 36-year-old woman, a dental assistant, who presented to the orthopedic clinic on April 1, 2021, with pain on the outer edge of both wrists at the base of the thumbs (Figure 1).
The onset of symptoms dates back to approximately two (2) months before pregnancy, marked by the gradual onset of wrist pain. This pain subsided during pregnancy, but then gradually worsened during the third trimester and after delivery.
Physical examination revealed a synovial cyst on the right wrist (Figure 2) and pain on palpation of the outer edge of the wrists at the base of the thumbs. Pain was elicited when the thumb was brought into contact with the base of the ring finger, with the wrist in ulnar deviation: positive Finkelstein's sign. Abduction of the thumb with the hand held in radial deviation caused pain and crying: positive Brunelli test.
An ultrasound scan of both wrists was performed, showing (Figures 3 and 4)

Discussion
- Bilateral tenosynovitis of the long abductor and short extensor tendons of the first finger; typical appearance of De Quervain's tenosynovitis.
- Fluid collection in the tendon sheath on the right (the side most clinically affected).
- Absence of hypervascularization, suggesting remission.

Previously known synovial cyst of the right carpus.

The patient received medical treatment with corticosteroids (triamcinolone: one injection per week for three weeks), NSAIDs (Profenide 100mg LP: One tablet twice daily) and a PPI (Omeprazole 20mg: One tablet daily); followed by immobilization of the wrists with a brace. The outcome was favorable. De Quervain's tenosynovitis, formerly known as crepitant peritendinitis, affects both sexes between the ages of 40 and 50, with a predominance in women. Its prevalence is 1.3% in women and 0.5% in men [4]. Hormonal status appears to be a contributing factor, as it particularly affects menopausal women [5], pregnant women, especially in the last trimester, and postpartum women [6]. According to An Diop et al, among the 22 patients studied, seven women were in the peripartum period; five were breastfeeding and one was in the last trimester of her pregnancy; the condition was bilateral in one case [7]. The diagnosis of tendinitis or tenosynovitis is essentially clinical and relies primarily on a good topographical knowledge of the tendon's path in the wrist and hand [8]. The clinical diagnosis is typically based on the Finkelstein maneuver, which highlights the conflict between the tendons and the bony part of the first dorsal compartment [9]. However, this test can be misleading in radial styloiditis and ligament injuries, according to Brunelli [10]. There may be swelling suggestive of exudative tenosynovitis. According to *G. Brunelli*, the *Brunelli* test is pathognomonic of the condition [11]. In case of doubt, an ultrasound scan may be requested to confirm the diagnosis.

Although its etiology remains unclear, the onset of this condition is associated with repetitive manual activity causing repeated microtrauma, as reported in our case.

Medical treatment is always offered as a first-line option, with a success rate of around 80% [12]. Surgery is currently indicated in cases where medical treatment has failed [13].

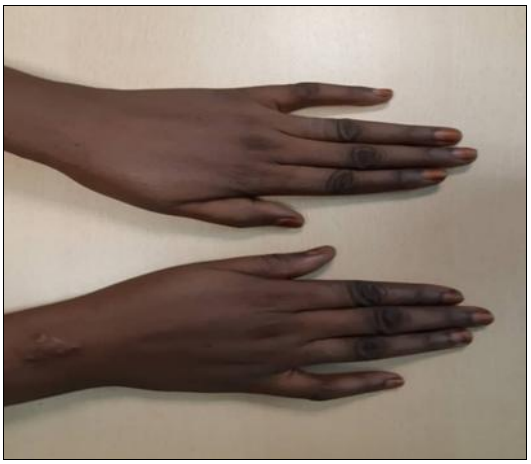

Fig 1: Back view of both wrists

Fig 2: Lateral view of both wrists showing a synovial cyst on the right carpus (arrow)

Fig 3: Ultrasound image showing Dequervain's tenosynovitis

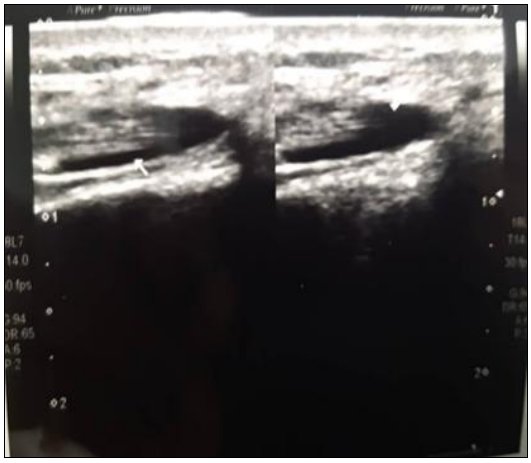

Fig 4: Ultrasound image showing fluid collection in the tendon sheath on the right side.

Conclusion

De Quervain's tenosynovitis is the most common form of tendinitis, although the bilateral form in the postpartum period remains rare. Diagnosis is essentially clinical. The main risk factors are repetitive microtrauma. Ultrasound can be used to confirm the diagnosis in cases of doubt. Treatment is medical, but surgery may be indicated in cases of stenosing or recurrent forms.

Acknowledgement

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Conflict of Interests

Tanya Bhagat, Dr. Atul Sharma, Dr. Prashant Narang, are on the payroll of Haleon India. For the remaining authors, none were declared.

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