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A CASE REPORT ON DE QUERVAIN'S TENOSYNOVITIS

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ABSTRACT
De Quervain's Tenosynovitis (DQST) is a condition also known as Gamers thumb or mothers thumb. We reported a case of 53 years old female patient with the complaints of swelling of right hand wrist and also experienced pain on extension and flexion of right thumb. She has been working as a tailor since 15 years. She came to the hospital 10 months back with the same complaints, Aspiration was done to drain the fluid from the cyst but the person didn't experience remission but she didn't limit her daily activities. Physician considered the case as Ganglion cyst for provisional diagnosis. After positive Finkelstein test, this case is diagnosed as de Quervain's Tenosynovitis.

KEYWORDS: De Quervain's Tenosynovitis, Flexion, Aspiration, Ganglion cyst, Finkelstein test.

INTRODUCTION

In 1985, De Quervain's Tenosynovitis condition was first described by Fritz de Quervain. Chronic overuse of wrist is the primary cause of the disease and common tendonitis of wrist caused by impaired gliding of the tendons of extensors pollicis brevis (EPB) and Abductor pollicis longus (APL) muscles provoked by the thickening of extensor retinaculum.

The prevalence of DQST in men was about 0.5% and in women 1.3%. Over the first dorsal compartment, patients with DQST experience radial wrist pain with tenderness and thumb movements.[1] Continues abduction of thumb and ulnar deviation of wrist generates stress on tendon whereas friction at the retinaculum sheath is produced by repeated and sustained movements, then slowly it progresses to narrowing and swelling of fibrosseous canal. Finally results in impairment of wrist, hand & thumb function and fails to perform activities such as lifting, pushing, pulling and gripping. The repetitive use of thumb and forceful grasping with ulnar deviation are the predisposing factors.[2]

During 1930's, a diagnostic test called Finkelstein's test was used but recently this test was being performed in four stages. Stage-1, the application of gravity assisted at the wrist by gentle active ulnar deviation. Stage-2, the patient's wrist is deviated in an ulnar direction. Stage-3, the examiner passively deviate the wrist in an ulnar direction. Stage-4, examiner flexes the thumb into palm passively. Along with this diagnostic test, the presence of a tender nodule over the radial styloid is also examined. Corticosteroids usually relive thickening and inflammation but may have recurrent symptoms while lifting, pulling and pushing. By following the successful surgery the permanent relief can be obtained.[3]

CASE REPORT

This is a case of 53 years old female patient admitted into Female Orthopaedic Ward with the chief complaints of swelling in the wrist of right hand and she also experienced pain on extension and flexion of right thumb. On Examination, Blood Pressure is 120/70mmHg, Pulse rate is 82bpm and Respiratory Rate is 22cpm. She has been working as a tailor since 15 years. When she came to the hospital 10 months back with the same complaints, Aspiration was done to drain the fluid from the cyst but the person didn't experience remission. She didn't limit her daily activities after this. Laboratory investigations were as follows: Random Blood Sugar-103mg/dl, Blood Urea-27mg/dl, Serum Creatinine-1.0mg/dl, Serum Bilirubin- 0.6mg/dl, Haemoglobin-9.5mg/dl, Total Leukocyte Count-5,800cells/mm3, Polymorphs- 66%, Lymphocytes-33%, Monocytes-4%, Eosinophils-2% and Platelet Count-1.9lakhs. Physician considered the case as Ganglion cyst for provisional diagnosis. After positive Finkelstein test, the final diagnosis of this case is de Quervain's Tenosynovitis.

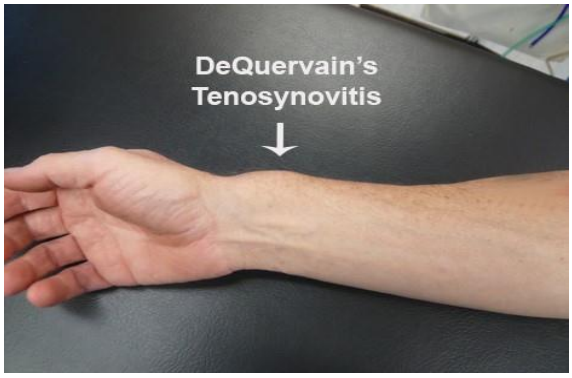

Fig A: Dorso-lateral view of De Quervain's Tenosynovitis.

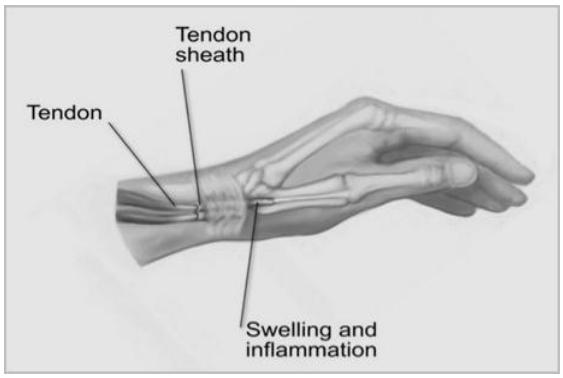

Fig B: Anatomical view of De Quervain's Tenosynovitis.

The patient is prescribed with Tab. Diclofenac 50mg 1-0-1, Tab. B Complex 1tab 0-1-0, Tab. Calcium 100mg 0-1-0 and Tab. Ranitidine 150mg BD for two days. After noticing her Haemoglobin count as 9.5mg/dl, Iron Folic acid 1tab 0-1-0 is also added to the prescription. On fourth day tendon release was done. Local Anaesthetic parts are prepared and a curved incision is made over the anatomical snuff box to proximal superficial radial nerve which is identified and refracted. Tendon sheath of first extensor compartment is identified and cut. Extensor Pollicis Brevis tendon movements are checked under direct vision. Wound is closed and dressing is done. Post operative orders include nil by mouth, IV fluids -25% dextrose, RL, NS, Inj. Monocef 1gm IV BD, Inj. Amikacin 500mg IV BD, Inj. Pantop 40mg IV OD and Tramadol 50mg/2ml IM BD for 3 days. She is discharged on the fourth day with the following medication: Tab. Cefixime 200mg BD, Tab. Ranitidine 150mg BD, Tab. Diclofenac Sodium 75mg BD, Tab. B Complex 1tab OD and Tab. Calcium 1gm OD. Surgery is performed and patient is discharged & advised to take rest for 2-3 months.

DISCUSSION

De Quervain's Tenosynovitis (DQST) is a painful condition affecting the tendons on the thumb side of the wrist. It probably hurts the person while turning the wrist, grasp anything or make a fist.[4] Individuals who use their thumb in repetitive pinching, wringing, lifting, grasping, or extension activities with the wrist are susceptible to progressive stenosis in the first dorsal compartment of the wrist.[5] The primary predisposing factor for the development of DQST is inadequate blood supply in small muscles. Training the muscles would increase vascular supply.[6]

Physical examination findings may include slight swelling about the radial styloid and normal but sometimes painful range of motion of the wrist and thumb. Passive stretching and contraction of the involved muscles and tendons generally increase pain.[7] The Finkelstein test is considered, electro diagnostic studies, laboratory findings, and imaging tests are usually performed, but injection of a local anaesthetic into the first dorsal compartment has been suggested as helpful in diagnosis. Treatment consists of NSAID'S and steroids.[8] Physical therapy management of De-Quervain syndrome may entail patient education, splinting, ice, heat, transcutaneous electrical nerve stimulation, ultrasound, iontophoresis, friction massage, exercise and joint mobilization.[6]

CONCLUSION

De Quervain's Tenosynovitis generally affects the individuals who perform repetitive movements with hands. In this case, the patient is a tailor. She performs the hand movements repetitively as a part of her occupation. Symptoms are not resolved even after draining the fluid in this case. Hence surgery is performed and the patient is discharged. She is asked to take bed rest for 2-3 months. According to our knowledge the cause of De Quervain's Tenosynovitis due to tailoring is rarely reported.

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