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CASE REPORT : DE QUERVAIN'S SYNDROME "SPECIALISTIC COMPETENCY THAT IS EASILY DIAGNOSED BY GENERAL PRACTITIONERS"

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Abstract

De Quervain syndrome is an inflammation of tendon sheath in synovial sheath covering extensor pollicis brevis and abductor pollicis longus accompanied with pain. Diagnosis can be made by general practitioner based on patient's history, clinical findings and proper maneuver. The aim of this study is to describe the specialist competencies that can be diagnosed by general practitioners using specific examinations.

Keywords : De Quervain syndrome, diagnosis, maneuver

Introduction

De Quervain's syndrome or De Quervain's tenosynovitis (DQTS) is inflammation of the tendons within the first extensor compartment of the wrist, resulting in wrist pain and swelling.[1,2] It is a mechanical disorder related to hypertrophy of the retinaculum that covers the first dorsal compartment of the wrist. [3] This syndrome is a level 4 specialist competence (diagnosis and self-management), but in contrast to general practitioners the DQTS competency is level 2 (diagnosis and referral).[4] Patients usually come to the general practitioner first, so that with a clinical examination (certain maneuvers) that is appropriate as a general practitioner can diagnose this disease. The purpose of this study is to explain that there are 2 maneuvers that can be performed for the correct diagnosis of DQTS.

Case report:

A 43-year-old male patient came to the general practitioner's office with complaints of pain at the base of the thumb and left wrist since 2 days ago. Pain is felt especially when using the hand and moving the thumb. Localized pain, intermittent for 3-5 minutes, pain appears when the wrist / thumb is used such as using a motorcycle and decreases when it is rested (not used). This pain

appeared after the patient in the last 4 months participated in fitness activities (fitness) lifting barbells. Moderate pain scale, with a VAS of 5-6. There was no history of previous illnesses such as diabetes mellitus, hypertension or others. To deal with pain, the patient took paracetamol 600 mg. From the results of the physical examination, the local status of the wrist region (wrist region) found that the left wrist was minimally hyperemic (+), edema (+), tenderness (+), active and passive movements of the base of the first digit were inhibited, rotational movement of the wrist was inhibited (+) , obstructed wrist abduction (+), Finkelstein test (+)

(a)

(b)

(c)

Figure 1. both Hands of the patient (a), right hand (b), Left Hand, pain at the base of the thumb and left wrist (red arrow) (c)

Discussion

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The six extensor compartments of the wrist serve as tunnels for tendons to pass from the forearm to the wrist.[5] At the wrist, the extensor retinaculum of the hand overlies the tendons of the extensor compartment of the wrist. It provides support as well as prevents bowstringing of the tendons. The first extensor compartment is comprised of the APL and EPB tendons.[1,2,6] The second extensor compartment is comprised of the ECRB and ECRL muscle tendons. The third extensor compartment is comprised of the EPL muscle tendon. The fourth extensor compartment is made up of the EIP and EDC muscle tendons. The fifth extensor compartment contains the EDM muscle tendon. The sixth extensor compartment harbors the ECU muscle tendon.[5]

There are several predisposing factors associated with this syndrome, including the presence of a septum that divides the first compartment into two subcompartments, pregnancy, the postpartum period, and lactation, and with activities involving repeated radioulnar deviation, such as hammering, cross country skiing, gym, or lifting a child or pet, etc.[6]

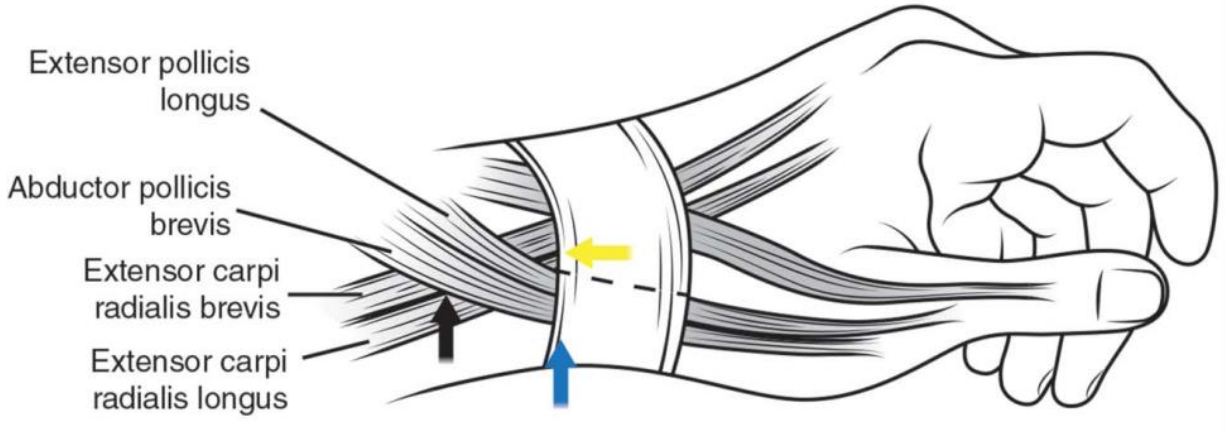

Figure 2. Illustration demonstrating the anatomy of the first (blue arrow) and second (yellow arrow) dorsal extensor compartments, differentiating the locations of de Quervain syndrome (blue arrow) and intersection syndrome (black arrow).[2]

Women had a significantly advanced rate of DQTS at 2.8 cases per 1000 person-years, compared to men at 0.6 per 1000 person-years. In the analysis of age groups, the highest incidence rate in the group > 40 years of age, with an occurrence rate of 1.37 per 1000 person-years. This risk arises due to the use of the thumb and wrist when doing household chores which puts constant pressure on the first dorsal.[7,8]

Symptoms of DQTS include pain near the base of the thumb, swelling near the base of the thumb, difficulty moving the thumb and wrist when doing something that involves grasping or

pinching.[2,9,10] These symptoms are aggravated by resisted motion of the thumb. Radial deviation and extension also can worsen the pain. Sign of DQTS include of inflammation on the base of thumb. [2] Diagnosis is based on clinical examination and history. Wrist x-rays may be taken to rule out alternative pathologies in the distal radius or carpal bones; Carpometacarpal arthritis (CMC) may be concurrent and may or may not be symptomatic. Other diagnostic tests are rarely necessary or useful.[2,11]

Based on the 2012 Indonesian Physician Competency Standards (SKDI 2012), diseases are classified into levels 1, 2, 3a, 3b, and 4. At level 1 cases it is expected that general practitioners can identify and explain, level 2 diagnose and refer, level 3a diagnose, conduct initial management, and refer (not an emergency), level 3b performs initial management, and refers (emergency cases) and level 4 diagnoses, carries out management independently and thoroughly. General practitioners are charged with providing health services at a certain level of disease (3a, 3b, and 4) whereas in the case of DQTS this includes disease competency level 2 (specialist competence), so what is needed is a diagnosis and referral.[4]

To diagnose this DQTS disease, it can be done with a simple examination Finklestein and Eichoff Manuever. The Eichhoff maneuver is performed by asking the patient to gently grasp the thumb in the palm while the wrist is ulnarly deviated by the examiner. Pain over the region of the first extensor compartment is considered a positive maneuver and considered consistent with de quervain tenosynovitis. The Finkelstein maneuver, as originally described, has the examiner passively flex the thumb and ulnarly deviate the wrist, with a positive maneuver producing pain over the first extensor compartment.[1,2,12–14]

(a) (b)

Figure 3. Finkelstein's test on the patient (a), Eichhoff's test on the patient (b)[14]

Conclusion

De Quervain's syndrome is a disease with competency level 2 that can be easily diagnosed by general practitioners by performing the Finkelnstein or Eichoff maneuvers. After diagnosis, the patient may be referred to a surgeon or bone specialist for further treatment.

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