

A De Quervain's Syndrome

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Abstract

De quervain's syndrome is inflammation of tendons on the side of the wrist at the base of the thumb. It can be brought on by strain injury to the extensor pollicis longus and abductor pollicis tendons. Treatment for de quervain's syndrome includes combination of rest, splinting, ice, anti-inflammatory medication, and cortisone injection. But permanent relief can be attained only by surgery to release the tendon sheath followed by occupational therapy to assist with healing of the disease.

Keywords: De Quervain's Syndrome; Strain Injury; Splinting; Surgery; Occupational Therapy; Healing.

Introduction

A case of 19 years female, is studying bachelor degree had a complaints of pain at both right and left wrist and unable to hold the pen in doing writing work for the 4 weeks. Onset of pain was gradually increased. Pertaining to her activities, she used to write many academic assignments, play shuttle cock and use mobile phones whenever she was on rest.

She denied any history of trauma as well as any numbness or tingling. The patient stated that the pain worsen when she writes for a longer time and struggling to perform her required duties. She presents requesting treatment for this pain in order to permit her to continue to work. The patient was diagnosed as having de quervain's syndrome by doctor based on the typical appearance, location of pain, tenderness of both right and left wrist, Positive finkelstein test and X-ray.

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After the diagnosis patient was given with anti inflammatory medications, calcium and vitamin D supplements as well as the splinting, and therapeutic exercises (Conservative care) for 4 weeks. Initially the patient did well with conservative care and after 4 weeks she returned to hospital requesting further treatment. The patient returned with increased pain and not able to perform academic works further after one month time. At this point, the possibility of surgical intervention as a definitive solution was discussed. After discussing the risks, benefits, alternatives, the patient opted to undergo operative intervention. The first dorsal compartment release was performed including release of sub compartment. The release was performed on the dorsal ridge of the compartment. The patient was provided with splint postoperatively for 1-2 weeks to allow for healing and immobilization. The splint is typically discontinued when sutures are removed and initiated therapeutic exercises. Now she was able to return to her work without pain.

Definition

De quervain's syndrome is inflammation of the tendons on the side of the wrist at the base of the

thumb. These include the extensor pollicis brevis and abductor pollicis longus tendons which extend the joints of the thumb.

Etiology & Risk Factors

Exact cause is unknown

- Wrist bending and movement associated with the twisting or driving of screw were most significant of the work-related factors.
- Repetitive strain injury considers postures where the thumb is held in abduction and adduction.
- Workers who perform rapid repetitive activities involving pinching, grasping, pulling, or pushing have been considered at increased risk.
- Intensive computer mouse use
- Track ball use
- Being female. Women are affected more than men.
- Typing as well as some postures including bowling, golf, fly-fishing, piano playing, sewing and knitting.
- The syndrome commonly occurs during and after pregnancy.

Contributing Factors

- Hormonal Changes
- Fluid Retention
- Rarely lifting

Diagnosis

- History collection and physical examination
- X-Ray to rule out fracture, arthritis and other causes.
- Finkelstein's Test: The examiner grasps the thumb and sharply deviate the hand toward the ulnar side, if sharp pain occurs along the distal radius (top of the forearm, about an inch below the wrist).

Clinical Manifestations

- Onset is often delay
- Pain at radial side of the wrist. Pain is made worse by movement of the thumb and wrist, and may radiate to the thumb or the forearm.
- Spasm and tenderness
- Swelling over the thumb side of the wrist
- Occasional burning sensation of the hand
- Difficulty grasping with the affected side of the hand

Pharmacological Management

- Applying heat or ice to the affected area
- Administer a non steroidal anti inflammatory drug (NSAID). These include ibuprofen or Naproxen.
- Avoiding activities that cause pain and swelling. Especially avoid those that involve repetitive hand or wrist movement.
- Wearing a splint 24 hours a day for 4 – 6 weeks to rest your thumb and wrist.

Most people notice improvement after 4 – 6 weeks of treatment. They are able to use their hands and wrists without pain once the swelling is gone.

Surgical Management

If other treatment measures don't relieve the pain, we go for surgical management. The surgeon makes a small cut in the sheath around the swollen tendons. This provides more room for the tendon to move. After the surgery, Physical therapy is needed to strengthen the wrist and thumb. Once the area has healed and returned to full strength, the patient can have normal use of her hand.

Role of Nurse in Post Operative Management of De Quervain's Syndrome

Teach the patient about the following

Dressing and Wound Care

- When showering or bathing cover the splint and hand with a plastic bag to keep everything dry.
- Elevate the hand above the heart as much as possible to lessen swelling and pain. Pillows and blankets should be kept under the arm while on sleep.
- Patient can use her hand for activities of daily living such as eating, writing, typing, getting dressed, brushed teeth, combing hair, preparing food and other light activities.
- Do not lift anything heavier than 0.5 kg to 1 kg until sutures have been removed.
- Do not do repeated arm or hand movements such as typing, using computer mouse, washing windows, vacuuming or chopping food.
- You can go back to work 1 -2 days after surgery. Also it depends on the type of work.

Incision Care

- Leave the bandage on a surgical hand until the doctor say it can be removed.

- After the bandages take off, wash the area daily with warm, soapy water and pat it dry

Ice and Elevation

- Put ice or cold pack on a hand and wrist for 10-20 minutes at a time. Try to do this every 1-2 hours for the next 3 days until the swelling goes down. This will help to reduce the swelling.
- Wear a sling to support the hand. Make sure to move the arm and shoulder often if you wear a sling. This will help to prevent elbow and shoulder from getting stiff.

Exercise

- Gently bend and straighten the fingers throughout the day to keep them flexible and helps to reduce the swelling.
- Wrist and hand therapy (Thumb lifts, opposition stretch, thumb flexion, finkelsteins stretch, wrist flexion, wrist extension, wrist radial deviation strengthening, resisted ulnar deviation, grip strengthening, and finger spring) to regain movement, strength and grip in wrist and hand.
- In order to get good prognosis, do the exercise correctly.

Summary and Conclusion

De quervain's syndrome is a painful condition that affects the tendons in the wrist. Some patients have been successfully treated with corticosteroid injections may have recurrent symptoms when they return to lift the heavy weight. But permanent relief can be attained only by surgical management. Also,

occupational therapy treatment methods for de quervain's syndrome assists with the healing of the disease through activity modification with patient education, splinting, use of modalities, and therapeutic exercises for edema and scar management.

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