

Orthopedic Medicine & Surgery

Trigger finger:

Stenosing tenosynovitis, aka trigger finger, is a condition that involves entrapment of the flexor tendon to the thumb or fingers of the hand. The entrapment occurs when the tendon and surrounding synovium becomes inflamed and a nodule develops. As the patient tries to flex or extend the finger the nodule becomes stuck on either side of the A1 pulley in the palm of the hand. Patients complain of a "popping or clicking" sensation as they try to flex and extend the involved finger/thumb. Often times the involved digit may become fixed in flexion and passive manipulation is needed to unlock the digit. In addition, patient may experience pain in the palm of the hand which corresponds to the area the involved tendon. Over time, the patient may start to protect the area and become reluctant to perform full rang of motion with the involved digit, leading to secondary stiffness and even contractures of the involved digit.



Pathology:

Flexor tendons, on the palm side of the hand, pass through a series of fibrous canals, referred to as pulleys, which are designed to balance motion of the fingers with force by keeping the tendon close to the bones of the hand. The triggering one experiences is secondary to impingement of the digital flexor tendon as it passes through the system of pulleys. As the condition continues the snapping, locking and popping often worsen as canal becomes narrower with continued irritation from a swollen tendon. Douglas Drake, MD Orthopedic Surgeon and Hand Specialist 3250 W. 66th St. Suite #100 Edina, MN 55435 952-920-0970

Prevalence:

Stenosing tenosynovitis often occurs for no reason in otherwise healthy individuals but is more commonly seen in women of middle age. The condition may affect one finger or the thumb or several digits at one time. The condition has a higher occurrence in patients with diabetes, gout, renal disease and rheumatoid arthritis secondary to the affects these diseases have on the soft tissue of the body.

Treatment:

Nonoperative treatment:

Most primary trigger fingers in relatively healthy individuals can be treated nonsurgically with splinting and a series of 2 corticosteroid injections into the tendon sheath. After a patient receives an injection in office they are ask to splint the affect digit at night for two-three weeks. If some benefit resulted from the first injection but minor symptoms continue a second injection can be given with hopes of complete resolution of the symptoms. However, if triggering continues after the second steroid injection and period of splinting the patient becomes a candidate for surgical intervention. Success of conservative treatment increase if the duration of symptoms have been brief, involve only one digit and are in otherwise health individuals, however this rate of success falls in diabetic, RA, renal disease and gouty patients.



Surgical treatment:

Surgical treatment is considered in patients who have failed a trial of injections/splinting and in those who present with multiple trigger fingers or have a preexisting medical condition such as diabetes, renal disease, RA, or gout which makes them a poor candidate for steroid injections secondary to failure rate.

Procedure:

Surgical release of the A1 pulley is done in a surgical suite under sterile conditions. A tourniquet is placed on the upper arm and inflated to provide a blood free field. Once the arm has been prepped in a sterile fashion a local injection of anesthetic is introduced into the surgical areas. A small "V" shaped or linear incision is made. Under high powered magnification vessels and nerves in the area are identified and retracted. The A1 pulley identified and split to allow the tendon to move freely. The patient is asked to move the finger while in the operative room to confirm that the tendon is free. The area is then closed with nylon sutures and light dressings placed. The procedure duration is about 15minutes. Rheumatoid patients should know that often times they need a more extensive procedure to clean out the thickened synovium along the length of the tendon, which will result in a longer procedure duration.

Aftercare:

The surgical area needs to be keep clean and dry until the sutures are removed at 10-14 days. There are no limitations in activity placed on the patient. In fact it is important to get the finger moving as soon as tolerated by the patient to prevent formation of adhesions which can result in reformation of the trigger finger.