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Trigger Finger

Summary

Trigger finger is caused by the tendon of the fingers or thumb catching, clicking or locking as it glides in and out of its tunnel (flexor sheath). Initially it causes pain at the base of the finger but eventually the finger locks when it is flexed. Nonoperative management is successful in >50% of cases. Surgery is advised if this fails or in severe cases.

Definition

Trigger finger is a potentially painful condition characterised by **catching, clicking or locking of fingers or thumb**.

Causes

The **flexor tendons run through a tunnel** called the flexor sheath. In between the tendon and sheath is a **thin membrane that reduces friction. Any pathology that interrupts this membrane** leads to chronic repetitive damage at the entry of the sheath, the A1 pulley. This leads to fibrocartilaginous metaplasia causing **thickening and stiffness of the A1**. Eventually this **leads to the tendon catching and locking** as it tries to glide back inside the sheath.

Risk Factors

It is common, affecting over **2% of the population**. Risk factors include diabetes, inflammatory arthritis and being female. The **thumb is most commonly involved**, probably because the tendon enters the sheath at a greater angle leading to increased pressure. The **ring finger is next** most common.

Symptoms

Symptoms include:

- Pain and tenderness at the base of the digit on the flexor side;
- Clicking which can be painful;
- Triggering where the finger needs to be actively or passively extended;
- Reduced flexion;
- Locked digit.

Carpal tunnel syndrome is common in people who have a trigger finger and can be treated at the same time.

Diagnosis

The diagnosis is made with a combination of history and examination. **Ultrasound is not generally needed** but can show thickening of the A1 pulley, fluid within the sheath, dynamic catching of the tendon and thickening of the tendon itself.

Examination findings include:

- Tenderness over the A1 pulley;
- Clicking or triggering of the digit;
- All digits should be examined as severe symptoms in one can mask others.

Treatment

Nonoperative management should be considered in mild or early cases. Nonsteriodal anti-inflammatories are commonly recommended for symptom relief. Activity modification is recommended, especially avoiding activities that provoke symptoms. Splints that block flexion of the metacarpophalangeal joint improve symptoms in ~70% if worn for 6-10 weeks, but patients find them cumbersome.

Cortisone injections can provide long term relief but recurrence rate is ~50% at 1 year in those with symptoms for <6 months. **Younger patients, diabetics and those with multiple digits involved are less likely to benefit.** Complications are rare.

Open trigger release requires a small incision at the base of the finger and dissection of the A1 pulley before its release. Multiple fingers can be done at the same time. It is best done under local anaesthetic so the patient can flex and demonstrate resolution before the skin is closed. If triggering remains, partial resection of a flexor tendon can be useful. **Open trigger release is successful in 97% of patients with a complication rate <10%.** Persistent stiffness and pain is the most common. Injury to a digital nerve is rare, even in the thumb where the nerve runs over the A1 pulley.

Operating on both hands is not recommended as it is difficult to keep both hands dry. Hygiene, opening jars, cooking and household chores may also be difficult.

Prevention

Looking after your health, including the treatment of associated conditions such as diabetes will help prevent trigger fingers. Modification of activities that exacerbate your symptoms may also help, including the use of a splint from a hand therapist. Care must be taken not to lose range of motion with long term use.

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