

A case of multiple trigger digits of one hand

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Abstract

The trigger finger is a tenosynovitis that causes pain, stabbing and loss of function and occurs as a result of inflammation and hypertrophy in flexor tendon and tendon sheath at the level of A1 pulley. The annual incidence of the population is 28 / 100,000 and the risk of life-time is 2-3%. It can affect all fingers mostly involving the ring, middle fingers and the thumb. Trigger finger is more common in middle-aged women rather than men mostly with predisposing factors. The treatment consists of conservative and surgical treatment. A 74-year-old woman with no other illnesses except diabetes mellitus was presented with a single-handed, multiple-patterned, surgically treated trigger finger.

Keywords: Trigger Finger; Multiple; Single Hand.

INTRODUCTION

Trigger finger is a tenosynovitis that causes pain, stabbing, and loss of function and occurs as a result of inflammation and hypertrophy in flexor tendon and tendon sheath at the level of A1 pulley (1). The annual incidence of the population is 28/100,000 in general and the risk of life-time is 2-3% (2). Trigger finger as a frequent repetitive strain injury of the hand more commonly occurs in diabetic patients and postmenopausal females mostly involving the ring, middle fingers and the thumb (3). The most successful methods used to treat trigger finger are corticosteroid injection and surgical release. Surgery has widely been used as the second line treatment after injections of corticosteroid. The main aim of surgery is to divide the annular pulley at the point of entrapment (4,5). We present an unusual case, in which there was development of single hand multiple trigger fingers of a diabetic patient.

CASE REPORT

A 74-year-old woman visited the clinic due to the presence of pain, limitation of finger movements and

deformity of the left hand digits. Her complaints had been aggravated during the previous three months. The patient had been treated three times with local steroid injections during the past year. The 3rd and 4th fingers had lost their movements within the last two weeks. The patient was a farmer and dealing with animal husbandry. The patient was not using any drugs, alcohol and cigarette. Her family history was negative and she had only diabetes mellitus. There was no other entrapment of upper extremity or tendonitis. On physical examination, when flexing the fingers she could not perform a forceful grip because of the pain and tendon entrapment at the A1 pulley, especially on the 3rd and 4th fingers. Also the 3rd and 4th fingers could not be brought into the extension. All affected finger's A1 pulleys were painful and the nodules could be palpated. Neuromotor and vascular pathology were not detected. Plain radiographs of both hands were normal.

According to the Quinell classification (6) for trigger finger. the 2nd and 5th fingers of the left hand were classified as 3rd degree, and the 3rd and 4th fingers were classified as 5th degree. Surgical procedure was considered for all fingers. 5 mL of lidocaine used for local anesthesia which was used to infiltrate the skin overlying each A1 pulley and precutaneously fill the flexor tendon sheath. A padded pneumatic forearm tourniquet was applied and a transverse incision was made over the metacarpal heads to perform the surgical procedure for all fingers at the same session (Figure 1). No complications were encountered in the 6-month follow-up.

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Figure 1. Intraoperative view after releasing A1 pulley with transvers incision.

DISCUSSION

Trigger finger is a tenosynovitis that causes pain, stabbing, and loss of function and occurs as a result of inflammation and hypertrophy in flexor tendon and tendon sheath at the level of A1 pulley (1). The exact etiology remains controversial. However, nodular thickening of the flexor tendon and/or narrowing of the flexor sheath prevents the flexor tendon from entering into the sheath. Prevalence is estimated to be 3% in the general population and 4th among the reasons of referral to hand surgery clinics (7). The annual incidence of the population is 28 / 100,000 and the risk of life-time is 2-3% (2). Women are affected 2 to 6 times more than men. It can affect all the digits in the hand but the thumb is more commonly affected in children, the thumb and the second finger in adults (1,8). As a frequent repetitive strain injury of the hand more commonly occurs in diabetic patients and postmenopausal females (3). Also collagen tissue diseases, hypothyroidism, De quervain disease, carpal tunnel syndrome and renal disease may be associated with trigger finger (4,9).

Diagnosis is based on physical examination and accompanying symptoms. In the treatment of trigger finger, corticosteroid injections has widely been used as the first line over surgery due to its ease of administration and favorable side effect profile with an efficacy of up to 93% (10,11). In patients with multiple triggering however, lower efficacy rates have been reported (10,11).

In conclusion we think from this report that milking may be an etiologic factor for trigger finger causing forceful grip, repetitive and compulsive finger flexion. To resolve symptoms of failed injection therapy for multiple trigger fingers, surgery of all fingers in the same session is an effective and safe method.

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