Synchronous ten trigger finger: A case report

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ABSTRACT

Trigger finger is a disorder that presents with a blocking feeling and pain during finger movements. This condition more commonly occurs in the 2nd finger with involvement of multiple digits being extremely rare. There are very few known cases in which trigger finger was developed in all ten fingers. Here, an unusual case of ten-digit finger trigger is presented. A 44-year-old female housewife visited our clinic with painful blocking feeling in her hand. Her examination was compatible with trigger finger. Her hands were operated on in different sessions and A1 pulleys of all fingers were released. After the operations, blocking feeling and pain during flexion disappeared and normal range of motion was obtained. On the occasion of this very rare case, the etiology and approach for multiple trigger fingers is discussed.

Key words: Multiple trigger finger, ten fingers, tendon

Introduction

Trigger finger is a condition characterized by pain with movement of the fingers. Trigger finger is most common in the thumb [1] while involvement of all ten digits is extremely rare [2]. When associated with conditions such as diabetes, rheumatological diseases and infections, or if there is family history, several digits may be involved. However, there are very few cases in which trigger finger develops in all ten fingers [2]. In the present work, an unusual case of ten-digit trigger finger is covered.

Case Report

A 44-year-old female housewife visited our clinic with a painful blocking feeling in all her ten fingers while carrying a plate or a teapot and beading. Her symptoms began two years ago in her right hand’s fourth finger; all fingers were involved within two years. The last finger to be affected was the left hand’s thumb (Figure 1). Her symptoms were aggravated 20 days ago. She did not receive any medical or surgical treatment.

Although there were not any significant nodules in her physical examination, tendon entrapments existed in A1 pulley levels in all fingers. As well, limited flexion and trigger finger was detected. Family history was unremarkable. Patient was non-smoker and despite age, not in postmenopausal period. She had no disease or operation history. There was no viral disease history within the previous six months.

Hand radiograms were normal. Thyroid function tests, urine function tests, and blood uric acid levels
were normal and collagenous disease markers were negative. Blood glucose levels were normal.

As there was no reason to explain the multiple trigger finger, the patient and her profession of a housewife was questioned further. Following further discussion, it became clear that she had been working on imitation jewellery design and making jewellery at home to sell (Figure 2).

Two operations were planned for the left and right hand. In the first session, the dominant hand was operated on. Under auxillary blockage and pneumatic tourniquet, A1 pulleys of all fingers were released by using transverse incisions above the head of each metacarpal bone. Digital vessels and nerves were preserved. A1 pulleys were revealed and divided longitudinally. Skin was closed primarily and wound dressing was performed. Postoperatively, patient engaged in a rehabilitation program where A1 pulley mobilization and stretching exercises were applied. After operation, the blocking feeling and pain during flexion disappeared and a normal range of motion was obtained.

Two months later, during the second operation, the non-dominant hand underwent operation and then same procedure applied. She was followed up for 15 months (Figure 3).

**Discussion**

Multiple trigger finger is a very rare condition [3]. In the literature, many etiological factors have been described. It is known that one of the bilateral multiple trigger fingers’ etiological factors is genetic [4]. If there are multiple fingers at pediatric age, congenital trigger finger should be focused on primarily [5]. Lee et al. reported that people who use their hand with too much frequency, who have trigger finger in their family history, or who have secondary trigger finger because of Raynaud’s disease are more likely to have trigger finger [5]. However, the patient here does not have any family history of the disorder and her trigger fingers are not related to a collagenous tissue disease.

In the literature, trigger finger incidence among diabetic patients is 10-20%, higher than among the normal population, which is 1.7 - 2.6% [6]. In addition, diabetic patients are more likely to have multiple trigger fingers [6]. It is remarkable that the case here has no diabetes mellitus. The reason is still unclear, but it was shown that one of the causes of trigger finger is carpal tunnel decompression operation. Coexistence of carpal tunnel syndrome and trigger finger is rather commonplace [7]. In this patient, a previous carpal tunnel operation or carpal tunnel findings were nonexistent.

Presence of ten trigger fingers, an important characteristic of the patient being discussed, is very unusual. Bilateral trigger finger is featured only in case reports. With those, it is shown that bilaterality is related to previous viral infections [8]. In this case, the last finger to be affected was 20 days beforehand, and within the last 6 months, no viral infections were reported.

One of the main contributing factors of trigger fin-
Ten trigger finger synchronously

Figure 3. Postoperative flexion and extension movements. (A) and (B) Lateral view, (C) and (D) Anterior view.

ger is the occupation of the patient. In this view, carpal
tunnel syndrome could be considered an occupational
disease. However, Treizies et al. has demonstrated that
there is no significant difference between the normal
population and the occupational distribution of pa-
tients who have trigger fingers [9]. Furthermore, Lee
et al. indicated that occupation is not an etiological fac-
tor of trigger finger, but that existing complaints could
be worsened with vibration work [5]. The case under
scrutiny here is included in the risk group of trigger fin-
ger based on being a housewife, though it is unlikely
to a ten finger trigger finger condition with only an oc-
cupational risk. Consequently, this situation has led to
detailing occupational history. Making imitation jewel-
ery does not involve vibration, but it is very fine work
and requires repetitive digital flexion with all fingers. As
a result, this particular instance condition may be the
reason of multiplicity of trigger fingers.

Multiple trigger finger etiology is multifactorial
or may be hidden. Additionally, precautions should
be taken after treatment against recurrent risk. For this
purpose, uncovering hidden etiology is important so as
to provide occupational therapy for the patient.

For treatment, steroid injections and conserva-
tive therapies are also described [10, 11]. Yet, in pain-
ful, multiple trigger that involves multiple risk fac-
tors, just as in this case, surgical treatment should be
performed. As well, it should not be forgotten that an
intense rehabilitation program is needed. In bilateral
trigger finger, both hands can be operated on simul-
taneously and there are surgeons who have indeed
adopted this idea. In this case, though, two different
sessions were performed in order to avoid disrupting
the patient’s daily life.

Overall, ten-digit trigger finger is a very rare condi-
tion. However, it is not to be ignored as its etiology is
most likely unique because of its manifested multiplic-
ity. Further, the occupational history of multiple trigger
fingers should not be limited to strictly professional oc-
cupations and clinicians should question what types of
repetitive activities the patient is engaged in.

Conflict of interest statement
The authors have no conflicts of interest to declare.

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