Trigger wrist. A case report

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Case Report

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Introduction: Trigger wrist clinical entity is an infrequent pathology comparing with stenosing flexor tenosynovitis or trigger finger. It is defined as: the painful click or catching sensation proximal to radiocarpal joint during finger or wrist motion.
The present case reports a 23-year-old woman with a trigger wrist diagnosis. A release surgery was held by wide-awake approach, under local anesthetic. An adjacent mass on the flexor digitorum profundus tendon of the third finger was completely resected as well as the synovial tissue. The anatomopathological study showed: compatible characteristics with a tendon sheath fibroma.
The trigger fingers at wrist level are uncommon compared with stenosing flexor tenosynovitis of fingers. The causes of this disorder can be multifactorial and always acting on flexor tendons of the fingers at wrist level. The diagnosis is based on a thorough clinical examination together with an accurate anamnesis. When there is triggering at wrist level together with a nerve compression syndrome, it is possible to deepen in paraclinical studies to elucidate the diagnosis.

Keywords: Trigger wrist

Introduction

Trigger wrist clinical entity is an infrequent pathology(1) comparing with stenosing flexor tenosynovitis or trigger finger. The first registration date is 1961(2) and it is defined as: the painful click or catching sensation proximal to radiocarpal joint during finger or wrist motion(3).

In the literature, symptoms associated with trigger wrist are caused by pathologies below or near anterior annular ligament and flexor retinaculum. Possible etiologies of the condition include: fibromas (4), giant-cell tumors, tenosynovitis, rheumatoid nodules in the flexor tendon sheaths inside the carpal tunnel, supernumerary muscle bellies or combinations of the abovementioned (5).

In this report we present the treatment performed in a young patient with clincal diagnosis of trigger wrist.

Case report

A 23-year-old woman, administrative employee, tobacco smoker, scheduled a plastic surgery appointment, due to a clinical record regarding pain on the base of the third finger for one year. In the following 3 months, a catching sensation on her third finger during active flexion was developed which spontaneously reverse. This event went together with pain that referred to her wrist. Concomitantly the patient complained about a snapping sensation at level of the anterior wrist, on the wrist crease.

Physical examination showed the catching during active flexion of the third finger with a spontaneous resolution when an active extension was done. By palpating the anterior wrist, the presence of a moving mass was noted which ascended subcutaneously during finger flexion.

Ultrasound was performed, it showed a tumor located between the flexor tendons pf the third finger, ovoid with little vascularization at the wrist level.

A release surgery was performed, designing a wide-awake approach, by a classical incision for carpal tunnel release extended towards the proximal third of the forearm under local anesthetic. (**Figure 1A**)

Once the anterior annular carpal ligament was sectioned, by active flexion maneuvers, a moving mass adjacent to the flexor digitorum profundus tendon of the third finger was observed. The mass was completely resected as well as the adjacent synovial tissue. (**Figure 1B**)

The anatomopathologic study of the resected portion showed: a well bound lesion with predominance of stromal cells, cellularity without atypia of myofibroblastic aspect, compatible characteristics of a tendon sheath fibroma as well as adhesion of synovial tissue.

8 months after the release surgery performed, no symptoms have showed recurrence in the patient.

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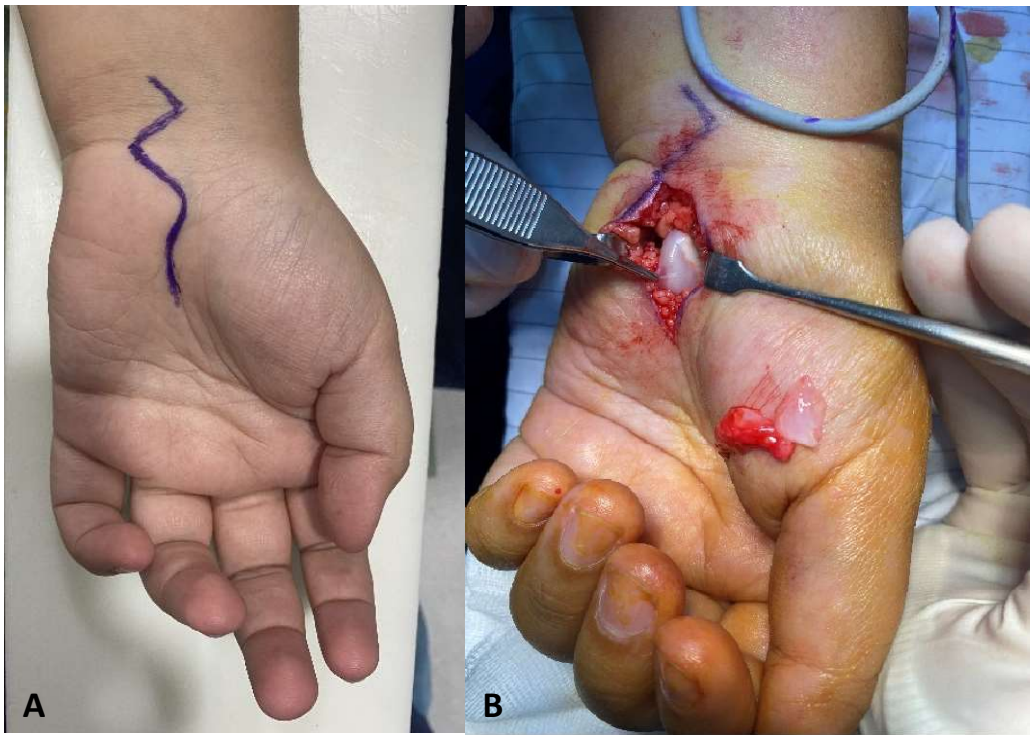

Figure 1. A. Incision for carpal tunnel release extended towards the proximal third of the forearm. **B.** Incision for carpal tunnel release extended towards the proximal third of the forearm

Discussion

First time described in 1961 by Eibel, thanks to a fibroma in a tendon sheath of the flexor digitorum profundus tendon [2]. The trigger wrist has been described in multiple occasions and has a low incidence in the general population. It is not as common as the stenosing flexor tenosynovitis of the fingers and due to its low frequency, it has been difficult to diagnose properly.

Until today, the term trigger wrist has been indistinctively used to include cases in which active or passive motion of fingers or wrist cause catching at wrist level (6). In 1985 Suematsu describes three trigger wrist categories according to its etiology. Within all of these categories, the flexor tendons of the fingers are involved (7).

This pathology diagnosis does not require specific tests. Only a thorough clinical examination and anamnesis need to be held in order to reach an accurate diagnosis. It is simpler to diagnose when clinical symptomatology is characterized by pain at the A1 pulley area or snapping with catching sensation at that level, as a typical stenosing flexor tenosynovitis. If this event goes together with the symptomatology of carpal tunnel syndrome, catching should be searched at that level (8)

Symptoms such as snapping or catching at wrist level, should be easily differentiated from stenosing flexor tenosynovitis of the fingers. However, as patients complain about non-specific pain at finger level, it is difficult to differentiate them (3,9). That is why if the pathology diagnosis is incorrect, it can lead to unnecessary surgeries and futile procedures such as corticosteroids injections or A1 pulley release.

The permanence of carpal tunnel symptomatology without provable finger catching, can also lead to the premature release of the median nerve with subsequent persistence of the problem.

If median nerve neuropathy constitutes the greatest worry of the patient, the examiner should perform a slightly thumb compression on the flexor retinaculum during active and passive motion of the fingers, which can lead to space-occupying lesions and can also lead to the entity of trigger wrist and need imaging tests to elucidate the diagnosis (5).

Tendon sheath fibromas, are dense formations, benign, of slow growth such as fiber nodules which are firmly joined to tendon sheath and are frequently found in hands and feet. Its configuration reminds the pigmented villonodular tenosynovitis, but with a lower cellularity and without elements of polymorphism of the previous one. In general they are of small size, are found in adults between 20 to 50 years-old, being more predominant in men. The superior limb is more frequently affected than the inferior one, being more frequent at finger level (10).

Tendon sheath fibroma, are benign processes which can relapse, but they do not generate systemic dissemination. Chung and Enzinger series described that a 24% of de patients developed local relapses. Exeresis and re exeresis relapses is the chosen treatment (11, 12).

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Conclusion

Trigger finger at wrist level, is an infrequent event if compared with stenosing flexor tenosynovitis of the fingers. The causes of this disorder can be multifactorial, always acting on the flexor tendons of the fingers at wrist level. The diagnosis is based on a thorough clinical examination together with an accurate anamnesis. When there is catching at the wrist level and goes together with a nerve compression symptomatology, it is possible to deepen in paraclinic studies to elucidate the diagnosis.

Conflicts of interests

No potential conflict of interest relevant to this article was reported.

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