Impingement of a fibroma of the extensor tendon sheath on the extensor retinaculum

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Abstract Deep lacerations to the forearm can cause impaired movement of the digits. This report describes the presentation and management of a self-harmer who presented with loss of motion of her ring finger. Surgical exploration unexpectedly demonstrated the cause to be a fibroma of the tendon sheath impinging on the extensor retinaculum. Full recovery was demonstrated at six-month review following removal of the lesion.

Keywords Tendon sheath · Fibroma · Impingement · Extensor retinaculum

Introduction

We report the presentation and management of a self-harmer who presented with loss of motion of her ring finger. Surgical exploration unexpectedly demonstrated the cause to be a fibroma of the tendon sheath impinging on the extensor retinaculum.

Case report

A 20-year-old, right hand dominant lady presented with a two month history of difficulty in extending her right ring finger. She was a self-harmer who described her symptoms occurring immediately after a self-inflicted laceration with a knife. The area involved was the dorsal aspect of the middle third of her forearm and on inspection she had a visible, well-healed, transverse scar. Examination of the ring finger demonstrated full active and passive flexion. However she was unable to actively extend the metacarpophalangeal joint beyond 15 degrees of flexion though this was fully correctable passively. A provisional diagnosis of peritendinous fibrosis was made, though an extensor tendon laceration with scarring to an adjacent tendon was also considered. To improve digital function, the patient elected for an extensor tenolysis.

At surgery, a longitudinal incision was made over the dorsal aspect of the forearm to expose the extensor tendons. A small amount of subcutaneous scar tissue was noted around the previous laceration and this was excised though this was not thought to be able to fully account for the symptoms. Accordingly, the incision was extended for exploration. A nodule arising distal to the extensor retinaculum and on the extensor tendon of the ring finger was noted (Fig. 1). On excursion of the extensor tendon, the nodule was noted to impinge upon the retinaculum in full extension. The nodule was carefully excised and full extension of the digit was subsequently easily achieved. Histopathological examination of the nodule identified it as a fibroma of the tendon sheath. Hand therapy was

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Fig. 1 Fibroma of the tendon sheath (FTS) can be seen distal to the extensor retinaculum (ER)

commenced in the early post-operative phase with instructions given for active range of motion exercises.

At her review at six months, the patient was able to fully extend the affected digit without difficulty.

Discussion

The incidence of non-fatal self harm is 100–600 per 100,000 people annually [1]. ‘Cutting episodes’ that cause impaired movement of the fingers and wrist are the most common way that a trauma or plastic surgery unit will encounter affected patients. Presentation can either be acute due to tendon lacerations, or chronic in which case peritendinous adhesions and fibrosis are likely.

Benign tumours were originally classified in to one of four types by Buxton in 1923: lipoma, fibroma, chondroma and ganglion [2]. However it was not until 1949 that the term ‘tendon sheath fibroma’ was first used [3]. Chung and Enzinger [4] described the largest series of these benign tumours and reported that they are well-circumscribed tumours that are often lobular and arise

from either a tendon or its sheath. It has an indistinct and generic macroscopic appearance that means that it is commonly misdiagnosed for other types of tumour such as a ganglion cyst [5] or a giant cell tumour [6]. Diagnosis is therefore based upon the distinct microscopic features.

Upper extremity involvement occurs in over 80% of cases though our case is atypical since they tend to be more common in males and also in flexor compartments. Furthermore, less than 10% of patients have a history of antecedent trauma [4].

In removing the lesion, careful dissection was paramount for two reasons. Firstly to avoid causing an iatrogenic tendon laceration whilst secondly, it may be assumed that removal of excess tissue at the base of the fibroma could affect the quality of the tendon and thus its strength. In such a scenario, there is potential for late rupture of the tendon leading to a complete loss of extension.

On the basis of this encountered case, we recommend that assessment of any laceration on the forearm whether it be new or old, should involve full testing of the underlying musculotendinous structures. For old injuries, this is due to the adhesions that may develop which prevent full motion of the distal joints. Furthermore this case illustrates the need for a complete clinical examination before surgery, even if an ‘evident’ aetiology is seen. It is possible that palpation and tenodesis tests performed in combination with ultrasound would have allowed the diagnosis to be established preoperatively.

References

1. Isacson G, Rich CL (2001) Management of patients who deliberately harm themselves. *BMJ* 322:213–215
2. Buxton St JD (1923) Tumours of tendon and tendon sheath. *Br J Surg* 10:469–474
3. Geschickter CF, Copeland MM (1949) Tumors of bone, 3rd edn. Lippincott, Philadelphia, pp. 693–695
4. Chung EB, Enzinger FM (1979) Fibroma of tendon sheath, *Cancer* 44:1945–1954