JHS(E)

The Journal of Hand Surgery
(European Volume)
2014, Vol. 39E(2) 207–217
jhs.sagepub.com
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Letters to the Editor
Short Report Letters

Carpal tunnel syndrome due to palmaris profundus tendon

Dear Sir,

A 57-year-old woman underwent left carpal tunnel release (CTR) for carpal tunnel syndrome (CTS). She had had paraesthesia in the thumb and index finger for several years but the symptoms became worse over the previous year. Work activities intensified the symptoms. Tinel's sign was positive. She had no symptoms on the right side.

An open CTR was done under local anaesthesia. The median nerve was found to be bifurcated into two main branches proximal to the flexor retinaculum. There was an aberrant tendon that was inserted on the deep surface of the superficial palmar fascia. It passed between the two median nerve branches, and was identified as an aberrant palmaris profundus (PP) tendon. The problem was discussed with the patient and the incision was extended above the wrist to explore the abnormal anatomical finding. The origin of the aberrant muscle was lateral to the flexor pollicis longus origin on the radius and the tendon crossed over the lateral branch of the median nerve, causing distinct compression on it at the level of the distal wrist crease. Then the tendon passed through the carpal tunnel, deep to the flexor retinaculum, before inserting on the deep surface of the superficial palmar fascia (Figure 1). The aberrant muscle and tendon were excised. There was no palmaris longus. The patient's symptoms were alleviated after surgery.

The PP may be a cause of CTS, an obstacle to endoscopic CTR and a cause of failed CTR (McClelland and Means, 2012; Pirola et al., 2009). The incidence of the PP anomaly has been reported to be one in 1600 cadaveric dissections (Reimann et al., 1944). It may be accompanied by other anatomical anomalies in the carpal tunnel region. PP is an independent anatomical variation and is not related to the presence or absence of palmaris longus. The origin and course of the PP are variable. It may arise from the radius, the fascias of different flexor muscles and from the ulna. It may be unilateral or bilateral (Pirola et al., 2009).

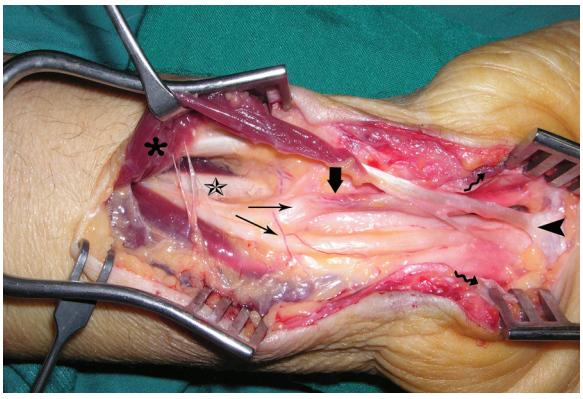

Figure 1. The asterisk indicates the palmaris profundus muscle. The arrow head indicates the insertion of the aberrant palmaris profundus tendon to the palmar fascia. The star indicates the flexor pollicis longus tendon. The small arrows indicate the bifurcated median nerve. The large arrow indicates where the palmaris profundus tendon crosses the lateral branch of the median nerve. The wavy arrows indicate the divided edges of the flexor retinaculum.

In the current case, CTS was directly related to the impingement of the PP tendon on the median nerve branch, rather than a result of decreased space in the tunnel because of the existence of an extra tendon. This is the second case of PP anomaly that the author has encountered in more than 2400 carpal tunnel operations over the last 17 years (Afshar, 2009). It highlights the importance of obtaining a comprehensive view of the carpal tunnel during CTR. A knowledge of the anatomical variations in this area increases the safety of CTR.

Conflict of interests

None declared.

References

Afshar A. Palmaris profundus as the cause of carpal tunnel syndrome. Arch Iran Med. 2009, 12: 415–6.

McClelland WB, Means KR. Palmaris profundus tendon prohibiting endoscopic carpal tunnel release: case report. J Hand Surg Am. 2012, 37: 695–8.
Pirola E, Hébert-Blouin MN, Amador N, Amrami KK, Spinner RJ. Palmaris profundus: one name, several subtypes, and a shared potential for nerve compression. Clin Anat. 2009, 22: 643–8.
Reimann AF, Daseler ED, Anson BJ, Beaton LE. The palmaris longus muscle and tendon. A study of 1600 extremities. Anat Rec. 1944, 89: 495 – 505.

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doi: 10.1177/1753193413497645 available online at http://jhs.sagepub.com

Kimura's disease affecting the superficial branch of the radial nerve

Dear Sir,

A 39-year-old Thai woman was referred for excision of a suspected parasitic mass in the right forearm. She had a 5-year history of a poorly defined mass that intermittently became erythematous and pruritic. There were no overlying skin changes. On palpation, the mass was firm, and fixed deeply but not to skin. It was non-tender and had a gritty or granular texture to it. She experienced no altered sensation over the distribution of the superficial radial nerve. Magnetic resonance imaging (MRI) of the affected area was reported as showing an inflammatory plaque of tissue within the subcutaneous tissues and with high signal on the T1-weighted sequence.

At surgery, a poorly demarcated inflammatory mass was dissected from a branch of the superficial radial nerve (Figure 1a). The histopathological findings were of numerous lymphoid follicles with discrete germinal centres scattered throughout a background of variably collagenous fibro-adipose tissue (Figure 1b). The inter-follicular connective tissue was richly vascular and contained an infiltrate of mature eosinophils, which were focally densely packed, forming occasional eosinophil micro-abscesses. Immunohistochemical examination of the lymphoid follicle component showed apparent ingress of mantle cells into many germinal centres, resulting in a 'moth-eaten' (folliculolytic) appearance with patchy disruption of the follicular dendritic cell network. The appearances were typical of Kimura's disease (KD) (Larroche and Blétry, 2005).

KD was first described as a rare, benign, chronic inflammatory disease of unknown aetiology. It was given its name after the definitive histological description by Kimura et al. (1948) and is also known as eosinophilic lymphogranuloma. KD is endemic in the Far East, with only a few cases reported in the West. The disease is characterized by painless subcutaneous lumps with a predilection for the head and neck, and is often accompanied by an eosinophilia and associated regional lymphadenopathy.

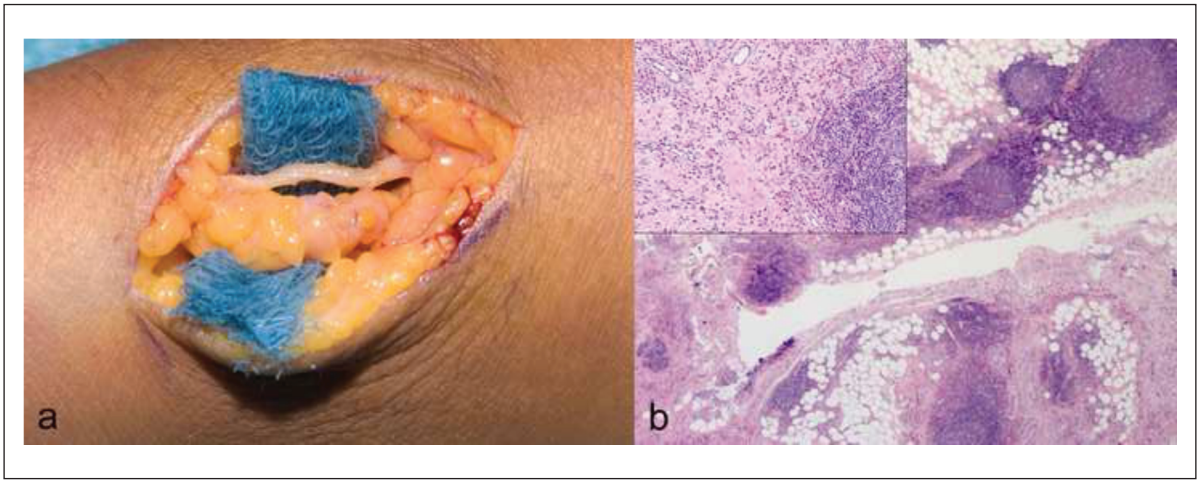

Figure 1. Kimura's disease. (a) Involvement of a branch of the superficial radial nerve (dissected from the mass). (b) Photomicrograph showing numerous lymphoid follicles with active germinal centres amongst variably fibrotic subcutaneous fat (haematoxylin and eosin [H&E] stain, original magnification x20). *Inset*: Photomicrograph of the edge of a lymphoid follicle and adjacent fibro-connective tissue showing prominent vascularity and eosinophil infiltrate (H&E, original magnification x100).