Absent Palmar Cutaneous Branch of Median Nerve

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Dear Sir/Madam,

A 67-year-old male presented with persistent symptoms of carpal tunnel syndrome 20 months following a carpal tunnel decompression performed under local anaesthesia. In addition, he was noted to have paraesthesia over the thenar eminence with a Tinel spot at the wrist crease radial to the flexor carpi radialis tendon. He then underwent re-exploration of the median nerve and its palmar cutaneous branch. An external neurolysis and a hypothenar fat flap were performed for the scarred median nerve. However when trying to identify the origin of palmar cutaneous branch, there was no side branch (radial or ulnar) evident up to 80 mm proximal to the wrist crease.

The base of thenar eminence was explored further and two cutaneous nerve branches were identified. They were dissected more proximally and would appear to have originated from the superficial radial nerve (Fig. 1). No other cutaneous nerve was identified.

Sensory supply to the base of the thenar eminence could arise from the median nerve, lateral antebrachial cutaneous nerve and superficial radial nerve [1]. The typical course of the palmar cutaneous branch of the median nerve is a branching from the median nerve approximately 5 cm proximal to the wrist. It runs on the ulnar side of flexor carpi radialis before crossing the flexor retinaculum. It divides into two branches, medial and lateral while crossing the flexor retinaculum. The lateral branch is larger while both supply sensation to the thenar eminence [2].

Although a number of anatomical variations of the palmar cutaneous branch had been described [1, 3–6], the incidence

Fig. 1 Anomalous sensory nerve branches to the thenar eminence

of its absence has not been documented. Hoppenfeld and deBoer report that a palmar cutaneous nerve may be absent being replaced by branches of the radial, musculocutaneous or ulnar nerves [2]. In our case, the branch appeared to be absent. Iatrogenic injury to the branch from carpal tunnel decompression is a recognised complication and could be a possibility in our patient. However there was no evidence of a transected nerve during the revision procedure.

This case highlights the importance of appreciation of anatomical variations when exploring peripheral nerves and raises the possibility of absent palmar cutaneous branch of the median nerve.

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