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Accessory Extensor Pollicis Longus :A Case Report

KEYWORDS

Dr. Pallavi A. Kulkarni
Associate Professor, S.K.N. Medical College and Hospital, Pune, India 411041

Dr. Sudhir M. Sant
Professor and Head of Department, S.K.N. Medical College and Hospital, Pune, India 411041

ABSTRACT *The aim of the present case report is to increase awareness of the presence of variations in Extensor Pollicis Longus anatomical arrangements. The variation was found during routine cadaveric dissection in an approximately 50 years old male cadaver, apparently healthy with no other anomaly. The condition was bilaterally present. An accessory extensor pollicis longus had a separate origin along with superficial group of common extensor muscles , normal muscle had its usual origin and both tendons were inserted at the distal phalynx of the thumb separately. When compared with literature the present case is unique and hence significant.*

INTRODUCTION

Variations of the long thumb extensor tendon to thumb are rare. They become important in cases that require repair or transfer of these tendons. The variations are reported in cadaveric dissections or found incidentally during surgery but in other cases they are responsible for symptoms like pain (1) or inability to extend the thumb(10).

CASE REPORT

During routine cadaveric dissection a curious bilaterally present case of double muscles of extensor pollicis longus was discovered. After going through literature it was found to be a very rare condition and was discussed with references.

The additional EPL was seen in a male cadaver of about 50 years old. The condition was bilaterally present. The origin of accessory muscle was from lateral epicondyle of the humerus i.e common extensor origin of superficial group muscles of forearm. The muscle was arising between extensor carpi radialis brevis and extensor digitorum.

Normally occurring extensor pollicis longus had its usual origin . Muscle bellies and tendons of original and accessory extensor pollicis longus were of equal size. The accessory muscle ended into a tendon which traversed along with extensor carpi radialis brevis and extensor digitorum tendon in posterior compartment of forearm. The accessory tendon was lodging on the groove on distal part of radius on radial side of original extensor pollicis longus tendon.

The accessory tendon crossed superficial to normal extensor pollicis longus tendon on the dorsum of the hand . Finally the both tendons were inserted at the base of distal phalynx of the thumb separately, accessory tendon lying on the ulnar side of the original extensor pollicis longus tendon. There were no intertendinous connections between accessory and adjacent tendons. Functionally independent passive traction on the accessory extensor pollicis longus tendon led to extension of distal interphalangeal joint. All other extensor muscles of the wrist and hand were present in their usual positions.

DICUSSION

Wood(11) in 1867 , Culver's(5) clinical case and Cauldwell's (2)cadaver dissection & Yoshida(12 reported supernumerary long extensor to the thumb connected to the index finger.

In the study noted by Kaplan and Nathan (7) in 1969 ,Chiu(3) ,Cohen and Haber(4) (1996),Beatty et al. (1)) there was an accessory tendon arising from another muscle located between the extensor pollicis longus and extensor indices proprius. Similar was the case of De Greef et al. (6) in 2006 mentioned that there were two tendons among them one was normal but the other was thinner and proximal dissection revealed a separate muscle belly for each extensor pollicis longus tendon. N.Sevivas(9) in 2009 that there were two tendons reaching to the distal phalynx of the thumb separately among them one was thick and the other was thin but origin not traced being surgical procedure.

As noted by Michael y. papaloizos (8) in the dissection there were two tendons among them accessory was one- third of original tendon . The two tendons joined proximal metacarpal phalangeal joint of the thumb to be inserted at base of distal phalynx.. The muscle originated from the third of ulna just distal to the origin of normal extensor pollicis longus muscle. As indicated by Sawaizumi et al. in a recent paper only few cases of EPL tendon duplication have been described

After the review of the available literature on accessory EPL, it is now concluded that the present case finding seems to be unique because -

- Most of the cases were unilateral but the present case is bilateral
- In some cases there was connections between EPL and extensor indices , in this case no such connection was found
- In few cases there was additional tendons which joined the normal EPL at MP joint to be inserted at distal phalynx of the thumb. But in present case the accessory tendon was inserted at the distal phalynx
- In two cases there were two separate tendons which were inserted separately at the distal phalynx of the thumb, but in these cases origin was not described as these were surgical procedures.
- In very few cases there were two separately bellies but in these cases accessory muscle was arising between normal EPL &extensor indicis . But in present study accessory muscle was arising along with superficial group of common extensor origin .

Finally to conclude ,the accessory muscle had its origin from superficial group of common extensor muscles and normal muscle had its usual origin and both tendons were inserted at the distal phalynx of the thumb separately.

The clinical implication of the accessory extensor pollicis longus tendons is not clear. Mostly they were found occasionally during cadaveric dissection or routine dorsal wrist surgeries.

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Beatty et al. associated with dorsoradial wrist pain. Awareness of potential tendon multiplicity and of possible variations in the anatomical course is important in assessment of diseased hand condition.

Fig. 1 Accessory extensor pollicis longus left side

Fig. 2 Accessory extensor pollicis longus right side

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