

Extensor Medii Proprius Muscle: A Case Report

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Abstract: Tendons of extensor muscles are the major constituents in the dorsum of the human hand. Additional muscle in the dorsum of hand is a topic of interest for anatomists, radiologists and clinicians. This additional muscle can mimic various clinical conditions. Moreover these additional muscles are of importance from evolutionary aspect. An additional muscle, extensor medii proprius was observed during routine dissection of 60 year old male cadaver. Details of the muscle and its significance are discussed in the article.

Keywords: Extensor medii proprius muscle, Cadaver.

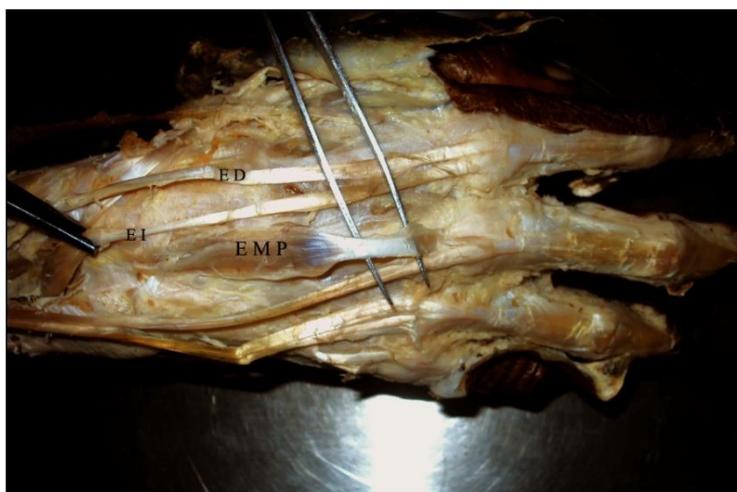
INTRODUCTION

The dorsum of the human hand contains the tendons of extensor digitorum communis, extensor indicis and extensor digiti minimi. The dorsum is usually devoid of muscle bellies. However the presence of various muscles in the dorsum of hand has been reported. Accessory abductor digiti minimi is reported in 24% cases, extensor digitorum brevis manus in 1 – 3% cases [1]. The presence of extensor medii proprius muscle has been described by many authors. Tan S T and Smith P J (1999) reported the incidence of this muscle between 0.8 – 10.4 % [2]. Von Schroeder HP and Botte MJ (1991) reported an incidence of 10.3% [3].

CASE REPORT

During routine dissection for undergraduate students a supernumerary muscle was observed in the dorsum of right hand in a 60 year old male cadaver. The fascia covering the muscle was removed and its origin, extent and insertion were noted.

The muscle was situated deep to the extensor retinaculum. The muscle fibres originated from the capsule covering the carpal joint and from inter carpal ligaments and inserted into the ulnar side of the dorsal digital expansion of the middle finger. It was identified as extensor medii proprius muscle.



**Fig: Dorsum of the Hand showing Extensor Medii Proprius Muscle (EMP);
ED – Extensor digitorum; EI – Extensor Indicis**

DISCUSSION

The extensor medii proprius muscle originates from distal third of ulna, extensor digitorum brevis manus, and distal end of radius, carpal ligament and

carpal joint capsule [4]. The muscle inserts into the dorsal digital expansion of the middle finger but it can also get inserted into deep fibrous tissue proximal to metacarpophalangeal joint [3].

Few authors considered extensor medii proprius muscle as analogous to the extensor indicis proprius muscle since both had common origin, but the former muscle inserts into long finger [3, 5].

The presence of these muscles may represent a failure of proximal migration of ulnocarpal elements of the antebrachial muscle mass in humans [6, 7]. The muscle is atavistic and represents a phylogenetic throwback to the amphibian. In amphibians the presence of extensor muscles in the dorsum of hand are present normally and plays a major role in extension of the hand. Some authors believed this anomaly to represent a homologue of the extensor digitorum brevis on the dorsum of foot [8].

Awareness of the presence of these muscles is important as they can mimick ganglion, soft tissue tumours, lipomas, inflammatory and infectious masses arising in the dorsum of wrist. Though the presence of these variant muscles remains asymptomatic in most of the individuals in some it might fill the space beneath the extensor retinaculum leading to compartment syndrome. Presence of the muscle in the fourth compartment is more prone for compartment syndrome which is manifested as chronic dorsal wrist pain [5].

CONCLUSION

Extensor medii proprius muscle was observed in the dorsum of right hand of a male cadaver. The muscle fibres originated from the capsule covering the carpal joint and from inter carpal ligaments and inserted into the ulnar side of the dorsal digital expansion of the middle finger. Presence of this supernumerary muscle is significant from development and evolutionary aspect. The knowledge of such supernumerary muscle should be kept in mind as they can be confused for other clinical swellings in the dorsum of the hand.

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