

Accessory Head of Flexor Pollicis Longus Muscle

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Abstract

The superior extremity of man has undergone various modifications during evolution. The flexor pollicis is an important muscle of the hand. A cadaveric dissection study of 60 upper extremities was done to determine the incidence of occurrence, morphology and relations of the accessory head of the flexor pollicis muscle. The accessory head of the flexor pollicis longus was found to be present in 24 (40%) upper extremities. In all cases (except two where they were getting origin from the fascia around the median nerve) it was found to be fused with the other muscles of the flexor pronator group of the forearm. In one case two accessory bellies were present. The tendon of accessory belly was merging with the tendon of flexor pollicis longus in all cases. In a case where two bellies were present in that the tendon of second belly was merging with the tendon of flexor digitorum profundus. The accessory belly was getting nerve supply from median nerve in 8 cases (33.33%) directly and from the anterior interosseous nerve in 16 cases (66.7%). The accessory belly per se may cause entrapment neuropathy of median and anterior interosseous nerve.

Key Words: Flexor muscles, Human cadavers, Accessory head, Evolution, Volar incision, Entrapment neuropathy

Introduction

The superior extremity of man has undergone various modifications during evolution. The flexor pollicis is an important muscle for the function of hand. It is absent in primates such as gorilla and chimpanzee in whom a well developed flexor hallucis longus perform the same function as that of flexor pollicis longus performs in man (*Mangini, 1960*).

The flexor pollicis longus muscle is described as arising chiefly from grooved anterior surface of the radius extending from below its tuberosity to the upper attachment of pronator quadratus muscle and adjacent interosseous membrane. In addition the flexor pollicis longus muscle may have additional origin from the medial border of the coronoid process of the ulna or from the medial epicondyl of the humerus. As the muscle is traced downwards, the origin expands to cover the entire

width of the anterior surface of the radius. A short distance above the wrist the tendon becomes rounded and free of muscle attachment and then passes behind the flexor retinaculum. The flexor pollicis longus inserts on the palmar surface of the base of the distal phalanx of thumb (*William et al., 2000*).

The accessory belly of muscle runs distally and obliquely from medial to lateral side underneath the flexor digitorum superficialis to join the principal flexor pollicis muscle and its tendon (*Hemmady, 1993*).

The flexor pollicis longus muscle is a comparatively recent acquisition in the evolution of hand. The study of its morphology is interesting from many view points, especially since it has definite clinical significance in injuries and surgical approaches around the elbow joint (*Mangini, 1960*).