



A CADAVERIC CASE REPORT ON NINE TENDINOUS SLIPS OF ABDUCTOR POLLICIS LONGUS

Anatomy

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ABSTRACT

During routine dissection of 58 year old male cadaver, in the Department of Anatomy, Bundelkhand Medical College, Sagar, M.P; Nine tendinous slips from single muscle belly of Abductor pollicis longus was noticed in the left upper limb of the cadaver. The tendons were arranged in parallel pattern. Being inserted on lateral surface of base of 1st metacarpal & the most medial slip got inserted by merging with belly of Abductor Pollicis brevis.

KEYWORDS

APL- Abductor pollicis longus tendon; Abductor Pollicis brevis; de Quervain's tenosynovitis

INTRODUCTION

The extensor compartment of the forearm has twelve muscles that are grouped into Seven superficial and five deep muscles. Out of five deep muscles of forearm, three muscles that move the thumb, these are Extensor Pollicis Brevis (EPB), Extensor Pollicis Longus (EPL) and Abductor Pollicis Longus (APL) muscles. The Abductor Pollicis Longus with Abductor Pollicis Brevis (APB) (Thenar muscle) abducts the thumb and acting with EPL & EPB it helps in extension of thumb at 1st carpo-metacarpal joint [1]. The comprehensive understanding of variations in tendons of the hand & the finger is necessary for the proper diagnosis of certain neurological disorders [2]. Variations in number of tendons of the APL muscle may be asymptomatic and often incidental finding [2,3] or may present with painful conditions like de Quervain's tenosynovitis (DQT) [4]. The treatment of such condition in severe cases involves either on injection therapy or surgical decompression of the first extensor compartment. Normally, It arises from the lateral part of the posterior surface of the shaft of the ulna below the anconeus, from the interosseous membrane, & from the middle third of the posterior surface of the radius immediately distal to the attachment of the supinator [5]. It then runs in a groove on the lateral side of the lower end of the radius accompanied by the tendon of EPB and inserts most commonly at radial side of the base of the 1st metacarpal bone [5].

Case Report

This study was carried out during routine dissection of 58 year old male cadaver, in the Department of Anatomy, Bundelkhand Medical College, Sagar, M.P. The extensor retinaculum was split vertically opposite the first extensor compartment and the underlying tendons of APL and extensor pollicis brevis were exposed. The number of tendons of APL noted and attachment identified.

An unusual APL noticed in the left upper limb of the cadaver.

The muscle had 9 tendinous slips arranged parallelly to each other. From lateral to medial; 8 lateral slips were inserted on lateral surface of base of 1st metacarpal while the medial most slip got inserted by merging with belly of Abductor Pollicis brevis.



Fig:1- Showing Nine tendons of Abductor Pollicis longus arranged in parallel fashion.



Fig.2: showing Nine Tendons of Abductor Pollicis Longus arranged in parallel fashion showing insertion in distal end of medial most tendon to belly of Abductor Pollicis Brevis and remaining 8 tendons to base of 1st metacarpal

DISCUSSION

Variation in the anatomy of the APL muscle plays an important role to understand the different disease processes associated with it & their treatment. Different authors have studied the variation of APL tendons but only few reports are available from the Indian. Hence it is essential to study the anatomical variation of APL in the Indian population.

Knowledge about its variations is important in clinical assessment and reconstructive surgery [6]. It is exceptional to find a single tendon or insertion of APL [7]. The multiple tendons of APL may alter the force component, thereby altering the mechanics of the thumb. During any surgery, the existence of multiple tendons of APL is bound to confuse any surgeon. Many a time, lack of prior anatomical knowledge may lead to inadequate surgical decompression of de Quervain's syndrome [2].

CONCLUSIONS

In hand surgery, a prior anatomical knowledge of the presence of accessory APL tendons would be useful to avoid any unintended injury. These accessory tendons can be detected by preoperative ultrasound or magnetic resonance imaging and can be functionally useful to compensate the damaged ones. Additional tendons may be used for reconstructive surgery. Also, it can be used as a tendon graft

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