A Case Study on the Unilateral Anomaly at the Anatomical Snuff Box in A Cadaver

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Abstract

In a routine cadaveric dissections in a cadaver the muscles and the tendons forming the Anatomical Snuff Box showed an anomaly where the attachment of the three tendons towards the thumb was different in left side hand than the right side hand which was normal.

Keywords: Anatomical Snuff Box; Pollex; Abductor Pollicis Longus; Extensor Pollicis Brevis and Extensor Pollicis longus.

INTRODUCTION

The anatomical snuffbox is a small triangular area situated in the radial part of the wrist, often used to perform clinical and surgical procedures. The anatomical snuffbox (AS) is a depression in wrist's radial part, limited by the tendons of abductor longus muscle, extensor pollicis brevis and extensor pollicis longus muscles.[1]

The muscles connected to the anatomical snuff box are crucial for stabilizing the wrist.[2]

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DISCUSSION

The Pollex or the Thumb has great variety of movement such as the flexion, extension, adduction, abduction and circumduction movement. These set of action is done by the three muscles of Thenar, Adductor pollics which are at the palmar (front) side of the hand. But in the Upper extremity the posterior compartment muscles which contain the deep muscles like the Abductor Pollicis Longus, Extensor Pollicis Brevis and Extensor Pollicis longus on back of Radius and Ulnar which does the function of Abduction, extension at the Carpo-metacarpal joint, Metacarpo-phalangeal with proximal and distal inter-phalangeal joints.

Here the Right hand showed normal set of origin and insertion at lateral side of base of first metacarpal for Abductor Pollicis Longus for Extensor Pollicis Brevis at dorsal surface of base of proximal phalanx so did the Extensor Pollicis longus at dorsal surface of base of distal phalanx of thumb.

But the anomaly was seen at the Left thumb with different set of attachment than was usual of the Right side thumb.

But in the Lt side of thumb the attachment was at the Carpo-metacarpal joint for both Abductor Pollicis Longus & Extensor Pollicis Brevis but for Extensor Pollicis Longus it was at Metacarpo-phalangeal joint. So the inter-phalangeal joints attachment was missing as because the previous two extensors were attached at the same joint.

INTERPRETATION

Thisanomaly may pose some difficulty in unique movements but would have compensated with the gross movements of the other set of muscles as a whole during the thumb movements.

Here the other important thing was the unilateral involvement on one side of the hand would be a developmental error seen in this particular cadaver.

- 1st arrow is Abductor Pollicis Longus
- 2nd arrow is Extensor Pollicis Brevis
- 3rd arrow is Extensor Pollicis longus

Fig. 1: Rt. Side Normal attachment

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- 1st arrow is Abductor Pollicis Longus
- 2nd arrow is Extensor Pollicis Brevis
- 3rd arrow is Extensor Pollicis longus

Fig. 1: Rt. Side Normal attachment

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