

**Editorial****ACCESSORY MUSCLES IN THE HYPOTHENAR COMPARTMENT OF THE HAND: ANATOMICAL AND CLINICAL CONSIDERATIONS****Srijit Das***Department of Anatomy, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia*

Unfortunately, many conventional textbooks of anatomy do not describe the anatomical variations in detail. Thus, research reports are the only source of information for the readers. Various researchers have reported the presence of anomalous muscles in the hand. Majority of the research reports are confined to cadaveric studies. It is very important to know the clinical implications of such anomalous muscles in the hand.

Considering the hypothenar compartment of the hand, there are reports of anomalous abductor digiti minimi (ADM) with regard to its bellies. A research study reported one to three muscle bellies of ADM (Claassen et al, 2013). The same study reported accessory heads of flexor digiti minimi (FDM) to originate from the flexor retinaculum (Claassen et al, 2013). An interesting finding was the presence of an anomalous muscle which originated from the tendon of the flexor carpi radialis, and inserted together with

the ADM muscle into the ulnar aspect of the fifth proximal phalanx (Bakinde et al, 2005). Research studies reported an accessory belly of the ADM muscle which originated from the tendon of the palmaris longus muscle (Soldado-Carrera et al, 2000). The presence of any accessory belly or anomalous muscle in the hypothenar compartment is sure to alter the kinematics especially with regard to flexion, adduction or even abduction at the fifth metacarpophalangeal joint. One may speculate such action but electromyographic studies may have to be performed for confirmation. Unfortunately, many of the cadaveric studies lack such facts.

Clinically, the presence of anomalous muscles may even impinge on or even compress the surrounding nerves and the vessels. The condition may not be detected clinically unless the symptoms exist in an individual. Interestingly, these anomalous muscles may simulate soft tissue tumor and they may erroneously diagnosed as ganglioma or lipoma (Spinner et al, 1996; Curry and Kuz, 2000). Arterial thrombosis may also result due to presence of an anomalous muscle (Georgiev, 2011).

The presence of an anomalous muscle may be explained embryologically as an abnormal persistence of an undifferentiated group of mesenchymal cells (Soldado-Carrera et al, 2000). The muscle mass has a definite embryological origin that are related to the forearm. There are chances of persistence or even cessation of existence with evolution in humans. Movements of any digit may also play an important role in the human evolution. Perhaps, the phylogeny and homologous genes in humans may help in better understanding of

the muscle anomaly. We hope that comparative anatomy could resurface again in recent times under anatomy curriculum for better explanation of the anomalous muscles present in any individual.

## References

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