

## Palmaris Longus Muscle: Presence or Absence, Does It Matter?

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Palmaris longus (PL) is a muscle of the flexor compartment of the forearm. The muscle originates from the medial epicondyle of the humerus and it is attached to the distal half of the flexor retinaculum and apex of the palmar aponeurosis (Parson 2009). The tendon crosses the flexor retinaculum to diverge into four ligamentous fibrous slips for all the digits except the thumb (Williams et al. 1995). These four slips form the palmar aponeurosis. Thus, there is genuine reason to believe that the degenerated tendon of PL exists as palmar aponeurosis. The PL is innervated by a branch from the median nerve.

Considering the embryological aspect, the existence of any anomalous muscle may be explained with regard to the abnormal persistence of any undifferentiated group of mesenchymal cells involved in the formation of upper limb muscles (Soldado-Carrera et al. 2000). Due to evolution, there may be cessation or persistence of muscle mass. It is noteworthy to perform future research studies and relate the anomalous PL to any particular physical

profession which involves rigorous use of flexor muscles of the forearm.

The PL has been reported to be absent unilaterally or bilaterally in many individuals (Stack 1973). There were interesting cases of PL being reversed, duplicated, bifid or being hypertrophied (Murabit et al. 2013). Additional slips may be present. Research studies showed that Egyptians had the highest rate of the absence of the PL muscle (Raouf et al. 2013). Interestingly, the African Americans and Asians were reported to have less prevalence of absence of PL compared to the Caucasians (Soltani et al. 2012).

Researchers carried out studies to ascertain the clinical implications. It was observed in both sexes, the grip strength of the hand was not affected in the absence of the PL but the pinch strength of the fourth and fifth digit decreased (Cetin et al. 2013). The PL may be important as a suitable graft and even surgeons consider it to be a useful anatomical landmark for hand surgeries. Anomalous PL in the carpal tunnel may even produce carpal tunnel syndrome or compartment syndrome.

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We as anatomist think that absence or anomalous PL may be important in day-to-day clinical practice.

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