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Variation of the proximal insertion of the abductor digiti minimi muscle and its correlation with Guyon's canal syndrome. Case report and literature review

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The abductor digiti minimi muscle usually arises from the pisiform bone, the flexor carpi ulnaris tendon and the pisohamate ligament. It ends in a flat tendon which divides into two slips, one attached to the ulnar side of the base of the proximal phalanx of the fifth finger, the other one to the ulnar border of the dorsal digital expansion of the extensor digiti minimi muscle.

Various studies have reported the frequency of anomalous muscles in approximately 22 to 35% of hands and it was in majority an anomalous abductor digiti minimi muscle. The knowledge of this original insertion is important because it can sometimes be correlated with ulnar nerve compression at Guyon's canal.

Compression of the ulnar nerve is far more frequent at the cervical spine and elbow level than at the wrist. Contrary to the carpal tunnel syndrome, so-called idiopathic ulnar tunnel syndrome is rare, extrinsic causes are usually responsible for the pathology and among them, anomalous muscles. One can suspect the presence of such an anomalous muscle when the compression syndrome concerns a patient who is not within the "usual" age group with symptoms initiated or aggravated by physical exercice. We describe the case of a unilateral original insertion and course of the ADMM on the medial part of the palmaris longus tendon on the left wrist.

This variation should be taken into consideration by surgeons during surgical procedures for ulnar nerve decompression at Guyon's canal and when performing antero-medial approach to the wrist between flexors tendons and ulnar bundle.

Key words

Abductor digiti minimi muscle, Guyon's canal syndrome, anatomical variation.