

A Rare Case Of Pronator Teres Syndrome & Accompanying Anterior Interosseous Nerve Syndrome

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INTRODUCTION:

Pronator teres syndrome (PTS) and anterior interosseous nerve syndrome (AINS) are rare, occurring in 1% of upper limb compression syndromes.¹ We report a case of both in the same patient.

CASE HISTORY:

A 45-year old right-handed mechanic presented with a 6-month history of left forearm pain, numbness and weakness in gripping with thumb and index finger. Sensation was reduced over median nerve distribution. He was unable to flex thumb interphalangeal joint (IPJ), index finger IPJ, and unable to perform “OK” sign. Tinel’s was positive over proximal third of forearm, and pain was reproduced by active pronation against resistance. Nerve conduction study (NCS) was normal. Since there was no improvement of symptoms with conservative therapy, surgical decompression was done. Intra-operatively, there was a distinct fibrous flexor digitorum superficialis (FDS) arch compressing both the median and anterior interosseous nerve (AIN) near its origin. 2 days post-release, there was reduction in pain and improvement in sensation.

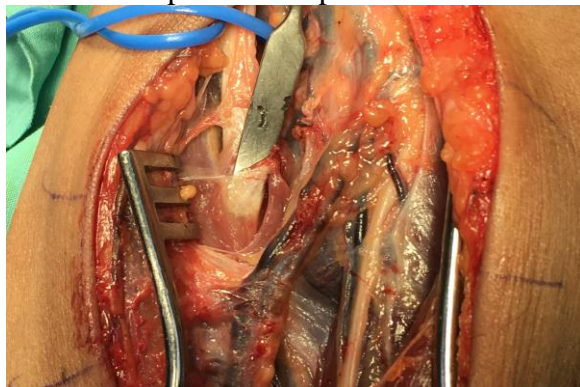


Figure 1: Median nerve & AIN beneath FDS arch

DISCUSSION:

As the median nerve enters the forearm, it can be compressed as it runs (1) beneath the bicipital aponeurosis, (2) passes within the

pronator teres, or (3) runs deep to fibrous arch of the FDS.² The AIN arises from the median nerve in relation to the fibrous arch, making it susceptible to compression.³

Both carpal tunnel syndrome and PTS can cause numbness over radial digits; however, patients with PTS also commonly complain of pain, aggravated by provocation test, and positive Tinel’s over proximal forearm,⁴ as in this patient. He also demonstrated loss of function of flexor pollicis longus and flexor digitorum profundus to index finger, consistent with complete AINS. Nerve conduction studies are not sensitive for proximal median nerve neuropathies, therefore a normal NCS does not rule out either diagnosis.

CONCLUSION:

While PTS and AINS are rare, this case highlights how they can arise simultaneously following entrapment of both nerves by the same anatomical structure. Comprehensive understanding of upper limb anatomy is important in making a correct diagnosis and for surgical planning.

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