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Case Report

Simultaneous Traumatic Avulsion of Flexor Digitorum Superficialis and Flexor Digitorum Profundus Tendons in Left Little Finger

Introduction

Avulsion injuries of the flexor digitorum profundus (FDP) tendon are common and widely reported [1-3]. Closed traumatic avulsion of the flexor digitorum superficialis (FDS) tendon is, however, rare, with few reported series of isolated FDS ruptures [3-6]. The FDS tendon is normally absent in the little finger of 33% of the population. There is a single case report documenting closed FDS and FDP injuries in the little finger. However, in this case the FDP ruptured at the DIPJ level, rather than being avulsed from its insertion [7]. We present a case of traumatic simultaneous avulsion of FDS and FDP tendons in the same finger.

Case Report

A 24 year old right handed farm worker presented with difficulty flexing his left little finger, two days after his hyperextended finger was trampled by cows. Physical examination revealed a closed injury of the left little finger that was minimally swollen and bruised. The patient had no active flexion at either the proximal or distal interphalangeal joints. There was no volar tenderness or laxity of the proximal interphalangeal joint suggestive of a volar plate injury. There was no neurovascular compromise. The contralateral FDS was present and intact. Plain X-ray film was normal, with no avulsion fractures. The patient was explored under axillary block on the day of presentation and the left little finger was explored through combined midaxial and Bruner approaches. Both slips of FDS and FDP tendons were avulsed from their insertion without bony fragments and had retracted to the distal end of the A2 pulley. Both vinculae of the FDP tendon were avulsed. C1, A3 and C2 pulleys were damaged. The volar plate was intact.

There was no tenosynovitis (Figure 1). The FDP was secured to its insertion by Mitek microanchor. This required 25% venting of the A4 pulley. The decision was made not to repair the the FDS tendon and both slips were trimmed (Figure 2). A dorsal hood splint was applied and patient was referred to hand therapy for standard flexor rehabilitation physiotherapy. He achieved an excellent outcome (Strickland criterion) at 3 months with return of 75% of contralateral grip strength.

Discussion

This is the first report of closed simultaneous avulsion of FDS and FDP in a little finger. There was no preceding synovitis, or previous injury. The decision to repair only FDP in a little finger where both are divided is accepted practice () in the presence of an intact volar plate, and led to an excellent outcome.



Figure 1



Figure 2

References

1. Boyes JH, Wilson JN, Smith JQ (1960) Flexor-tendon ruptures in the forearm and hand. *J Bone Joint Surg Am* 42: 637-646. [Link: https://goo.gl/JziWqe](https://goo.gl/JziWqe)
2. Leddy JP, Packer JW (1977) Avulsion of the profundus tendon insertion in athletes. *J Hand Surg Am* 2: 66-69. [Link: https://goo.gl/QPZ7el](https://goo.gl/QPZ7el)
3. Imbriglia JE, Goldstein SA (1987) Intratendinous ruptures of the flexor digitorum profundus tendon of the small finger. *J Hand Surg Am* 12: 985-991. [Link: https://goo.gl/RG0X27](https://goo.gl/RG0X27)
4. Imai S, Kubo M, Kikuchi K, Ueba H, Matsusue Y (2004) Spontaneous rupture of the flexor digitorum profundus and superficialis of the index finger and the flexor pollicis longus without labor-associated tendon loading. *J Hand Surg Am* 29: 587-590 [Link: https://goo.gl/1ZobS6](https://goo.gl/1ZobS6)
5. Lin CJ, Lin MJ, Tsai CH (2010) Simultaneous spontaneous ruptures of both flexor tendons in the little finger. *J Hand Surg Eur* 35: 236. [Link: https://goo.gl/A7WIGT](https://goo.gl/A7WIGT)
6. Lanzetta M, Conolly WB (1992) Closed rupture of both flexor tendons in the same digit. *J Hand Surg Br* 17: 479-480. [Link: https://goo.gl/W11Mdt](https://goo.gl/W11Mdt)
7. Jerome JT (2010) Closed ruptures of both flexor tendons of the little finger. *J Hand Surg Eur* 35: 238 [Link: https://goo.gl/2oGneS](https://goo.gl/2oGneS)