

Closed rupture of the extensor indicis tendon: An unusual cause of swelling over the dorsum of the hand

Dear Sir,

A 23-year-old man presented with pain and swelling on the dorsum of the left wrist, 2 days after an injury to the left hand, sustained while trying to drill a metal object that had spun from his hand, leading to forced flexion of the index finger as well as direct impact by the metal on the dorsum of hand. On his first visit, he did not have restriction of finger movements and there was a swelling on the dorsum of the hand with tenderness. The swelling measured 3 × 3 cm, with ill-defined borders and without any extensor lag at index, middle, ring, and little fingers. He was treated symptomatically with analgesics, rest, and a compression bandage. The radiograph of the wrist was normal, with no evidence of any carpal injury.

One month after the injury he returned. The pain persisted and the size of the swelling remained the same. The swelling was soft in consistency, compressible, and tender. Considering the painful nature of the swelling, exploration was considered. At operation we found a well-organized bursa-like (cystic) swelling, superficial to the extensor digitorum (ED) tendons of the index, middle, ring, and little fingers. The extensor indicis (EI) tendon was found to be completely ruptured at its musculotendinous junction with the ragged ends of the tendon and a small organized haematoma inside the swelling. The bursa was excised and the EI tendon was side hitched to the ED tendon of the index finger (Figures 1 and 2).



Figure 1. Ruptured EI tendon found inside the swelling.



Figure 2. End of the EI tendon at the ulnar side of the ED tendon of the index finger.

Rupture of the extensor tendons secondary to a malunited distal radial fracture or rheumatoid arthritis is relatively common, but closed traumatic rupture of the extensors is uncommon (Mudgal and Mudgal, 2007). McMaster (1933) described the direct and indirect mechanism of traumatic ruptures. In the direct mechanism, the tendon gets caught between the bone and traumatizing agent; whereas, in the more common indirect mechanism, the tendon is subjected to strong passive force in the opposite direction by the forcefully contracting muscle. Isolated traumatic complete rupture of the EI is rare. Takami et al. (1995) reported the largest series of closed traumatic rupture of extensor tendons, comprising 10 cases. There was only one case of isolated complete rupture of EI. We could find no other report of isolated rupture of the EI.

The clinical importance of this case lies in its presentation, as a swelling over the dorsum of the hand after trauma, causing diagnostic dilemma. Because the rupture of EI does not cause any motor deficit, the diagnosis of tendon rupture was missed. The history of the onset of the swelling after injury was important when analyzing the diagnosis retrospectively.

Conflict of interests

None declared.

References

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