Extensor Tendon Ruptures In Primary Osteoarthritis Of Distal Radioulnar Joint

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INTRODUCTION:

Although spontaneous extensor tendon rupture often occurs in association with rheumatoid arthritis (RA), extensor tendon rupture associated with osteoarthritis of distal radioulnar joint (DRUJ) is less common and has been rarely reported. This condition was first reported by Vaughan Jackson in 1984 [(1)]. The mechanism of the rupture results from perforation of the dorsal capsule of the DRUJ by attrition of dorsally dislocated ulnar head during pronation and supination movements [(2)(3)]. According to Frieberg et al, 'Scallop sign' correlate with the high risk for extensor tendon rupture [(4)] We found two cases of attritional rupture of extensor tendons of patients who were never been diagnosed with RA. Both patients were referred to a rheumatologist for further evaluation and management.

CASE 1: A 86-year-old Chinese lady, presented with sudden onset of inability to extend her right little (LF), ring (RF) and middle finger (MF) for 3 months, without any prior trauma or infection. She was treated with extensor tendon reconstruction using the palmaris longus tendon graft and Darrach procedure

CASE 2: A 58-year-old Malay lady, presented with inability to extend her left LF and RF, which occur spontaneously without any trauma or infection. She was treated with tendon transfer. She refused for Sauve Kapandji procedure.

Both of them had neither systemic illness nor joint pain. On examination, both of them had prominent ulna head and painless swelling at dorsum of affected hand. Total loss of extension was seen in affected fingers and sensation was intact. There was no DRUJ tenderness on supination and pronation.

Radiographs of both wrists showed degenerative changes at DRUJ with 'scallop' sign (Figure 1).

Figure 1: Wrist radiographs (AP) of case 1 (a) and case 2 (b) showing subchondral sclerosis, 'scallop sign' with scooped-out appearance of sigmoid notch of the radius

DISCUSSIONS:

The initial presentation of these patients was finger drop. There was no history suggestive of trauma or inflammatory arthritis. Suspecting the commonest presentation in RA, we referred to rheumatologist for opinion. Blood investigations in both patients were negative for Rheumatoid factor (RF) and anti-CCP. Both patients were treated conservatively by the rheumatologist.

Operative findings of both patients showed inflamed synovium and hyperplasia (Figure 2). However, the synovial tissue did not look like pannus, which was confirmed by histopathological examination (HPE).

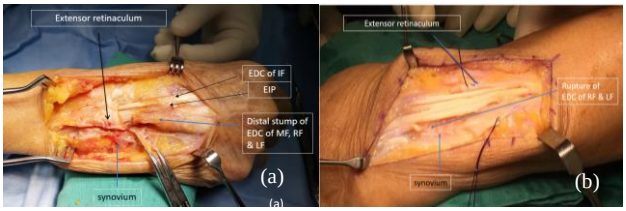

Figure 2: Intraoperative of case 1 (a) and case 2 (b) noted inflamed synovium & stump of ruptured extensor tendons

HPE report of synovium for both cases showed synovial hyperplasia with chronic inflammation, and no pannus-like granulation tissue.

Both patients had good outcome after surgery and regained ability to extend all the fingers. There was no recurrence of swelling or tendon rupture in one year follow up.

CONCLUSION:

Extensor tendon ruptures can occur in primary osteoarthritis of DRUJ. However, secondary causes should be excluded. Besides tendon reconstruction, DRUJ OA should be addressed intraoperatively to prevent recurrence.

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