

Closed Extensor Indicis Proprius Tendon Rupture Presenting Mass Clinic on Dorsal Side of the Wrist

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ABSTRACT

A 28 years old male constructor referred to our clinic for a mass on the dorsal side of the left wrist. He has constricted his hand to the plaster cast machine in hyperflexion posture one month ago and swelling complaint has begun one week ago. MRI revealed tenosynovitis. A wide organized hematoma was appeared in the 4th extensor compartment in the surgical exploration of the patient and it was observed that extensor indicis proprius tendon has detached from the musculotendineous region. Common extensor tendon of the second finger was intact. Tenodesis to the distal end of the ruptured tendon to the intact common extensor tendon by side to side surgical suture technique was performed. There were complete extension in the 2nd finger at the 2nd month after the surgery.

Key words: Closed tendon rupture, extensor indicis proprius, musculotendineous region

Bilek Sırt Tarafında Kitle Kliniği Sunan Kapalı Ekstansör İndicis Proprius Tendon Yırtığı

ÖZET

28 yaşında erkek işçi sol el bileğinde kitle şikayeti ile kliniğimize başvurdu. Hasta 1 ay önce elini hiperfleksiyon pozisyonunda alçı karıştırma makinesine sıkıştırmış ve 1 hafta önce de şişlik şikayeti başlamış. MRG'de tenosinovit gözlemlendi. 4. ekstansör kompartmanın cerrahi eksplorasyonunda geniş organize hematom ve ekstansör indicis proprius tendonunun muskulotendinöz bölgeden kopmuşu görüldü. İşaret parmağı kommon ekstansör tendonunun sağlam olduğu görüldü. Kopuk olan ekstansör tendonun distal ucu yan-yan cerrahi dikiş tekniği kullanılarak sağlam olan kommon ekstansör tendona tenodez yapıldı. Ameliyat sonrası 2. ayda işaret parmağında tam ekstansiyon mevcuttu.

Anahtar kelimeler: Kapalı tendon rüptürü, ekstansör indicis proprius, muskulokutenöz bölge

INTRODUCTION

Many cases of spontaneous ruptures of the extensor tendons at the wrist have been reported. The most frequent reason of closed rupture of extensor tendons are distal radius fractures and rheumatoid arthritis. The most common ruptured extensor tendon in the wrist level is extensor pollicis longus. Rupture of isolated extensor indicis proprius tendon is a extremely rare entity.

CASE

A 28 years old male constructor applied with a mass on the dorsal side of the wrist. The patient had a flexion

compelling by constraining his left wrist to the plaster cast mixer approximately two months ago and he had not applied to any health centre after the trauma.

Upon progressing swelling complaint which has started 1 week after the trauma and increased in time, the patient had applied to another health centre after 1 month and puncture had been performed to the swelling on the wrist. Swelling had been moderated after the puncture but after the complaint was repeated, the patient has applied to our clinic. The patient was evaluated by anamnesis, physical examination, X-ray (Figure 1) and MRI (Figure 2). It was detected from his medical history that he has no inflammatory disease and no use of antibiotics or corticosteroids. Neurovascular ex-

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Figure 1. X-ray of the left hand revealing no pathologic changes

amination of the patient was evaluated normally. There were no pathological findings in the finger movements. The mass on the left wrist was 3*2 cm, painless, like soft tissue and immobile. Any pathology was not detected in the X-ray. A fluid image which was considered to be complied with tenosynovitis covering extensor tendons on the dorsal side of the wrist was detected and other wrist structures were healthy. It was entered from the mass of the dorsal side of the wrist by longitudinal incision. When the tendon sheath of the extensor compartment was opened, organized hematoma and serous fluid was met. It was observed that the tendon sheath was hypertrophic in the 4 cm part and extensor indicis proprius tendon was damaged and ruptured from musculotendinous region (Figure 3). Common extensor tendon of the second finger was intact. Tenodesis to the distal end of the ruptured tendon to the intact common extensor tendon by side to side surgical suture technique was performed. The patient was monitored by short arm fracture brace for 2 weeks and then mobilized by recommending active and passive exercises. The patient has complete movement in the 2nd finger in his control after 2 months and he went back to work at the end of this period (Figure 4).



Figure 2. MRI of the left hand revealing tenosynovitis at the 4th extensor compartment

DISCUSSION

The most frequent reason of closed rupture of extensor tendons are distal radius fractures (1) and Rheumatoid arthritis (2). Extensor tendon ruptures arise most commonly as a complication of Colles fractures among distal radius fractures (3, 4). Apart from this, closed tendon ruptures were reported in various wrist traumas such as Smith fracture (5, 6), Galeazzi fractured dislocation (6), Scaphoid fracture (7), serious displaced wrist fracture (8) and subluxation of the distal radioulnar joint (7, 9) and rheumatologic disorders such as Scleroderma, Systemic Lupus Erythematosus. Other rare causes of the spontaneous rupture include osteoarthritis of the radioulnar joint (9), use of fluoroquinolone group antibiotics, use of corticosteroids and together using of these two medications (10) and sportive activities. The most common ruptured extensor tendon in the wrist level is Extensor pollicis longus (11-13). Rupture of isolated extensor indicis proprius tendon is a quite rare situation. We detect only two cases with closed isolated extensor indicis proprius tendon rupture. One of them is a gymnast whom extensor indicis proprius tendon rupture was seen after minimal displaced distal radius green stick fracture (14). Finger movements are utilized as well as tenodesis effect of the wrist in the examination of the finger tendon continuity. As either movements or tenodesis effect were normal in our patient, we did not consider about tendon rupture in our patient. Index finger extension loss may occur after extensor tendon transfer



Figure 3. Intraoperative photograph showing that the tendon sheath was hypertrophic in the 4 cm part and extensor indicis proprius tendon was damaged and ruptured from musculotendinous region



Figure 4. Postoperative photograph showing that the patient has complete movement in the 2nd finger in his control after 2 months

in the treatment of extensor pollicis longus tendon ruptures and this may cause a problem especially for musicians and keyboard users.

We consider that extensor indicis proprius tendon ruptures may appear without any clinical symptom by giving a mass image on the dorsal side of the wrist in the examination of tendon and this kind of rare situations should be kept in mind.

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