An acute dislocation of the trapezio-metacarpal joint usually occurs as a result of indirect mechanism. If dislocation is caused by direct mechanism various accompanying pathologies may be present. In this paper we present the late result of an trapezio-metacarpal joint dislocation caused by direct mechanism associated with proximal intermetacarpal ligament rupture of 2nd and 3rd metacarpals.

**Key Words:**  Trapeziometacarpal joint, Trapeziometacarpal joint dislocation

**BAŞPARMAK KARPOMETAKARPAL DİSLOKASYONUNA EŞLİK EDEN PROKSİMAL İNTERMETAKARPAL LİGAMENT YıRTIĞI**

Trapezio-metakarpal eklem akut dislokasyonu genellikle indirekt mekanizma ile oluşur. Eğer dislokasyon direkt mekanizma ile oluşması beraberinde eşlik eden patolojiler olabilir. Bu yazida direkt mekanizma ile oluşmuş ve beraberinde ikinci ve üçüncü metakarp proksimal intermetakarpal ligament yırtığı meydana gelmiş bir trapezio-metakarpal dislokasyonunun geç dönem sonuçlarını sunuyoruz.

**Anahat Kelimeler:** Trapeziometakarpal eklem, Trapeziometakarpal dislokasyonu

Acute traumatic dislocation of the trapezio-metacarpal joint is an rare entity (4,5). In literature several injuries associated with trapezio-metacarpal dislocation has been described although only 42 cases with trapezio-metacarpal dislocation without fracture were reported (1). These reports include associated trapezium fracture (6), ipsilateral radius fracture (1), fracture of the basis of 2nd metacarpal (2).

In this paper we described dorsal dislocation of trapezio-metacarpal joint associated with proximal intermetacarpal ligament rupture for the first time.

**CASE REPORT**

A 34 years old right hand dominant male patient applied to our clinic following an injection press injury to his left hand. His whole hand was swollen and painful. On dorsal and volar sides of the hand there were multiple lacerations. Radiological examination on AP/LAT plan revealed dorsal dislocation of trapezio-metacarpal joint and fracture of the second metacarpal (Fig.1). The position of the proximal segment of broken second metacarpal had warned us about a possible rupture of proximal intermetacarpal ligament connecting 2nd and 3rd metacarpals. Oblique views revealed dissociation of 2nd and 3rd metacarpals (Fig.2).

The patient was operated on the same day under regional anesthesis. Second metacarpal fracture was reduced approaching through the laceration on the dorsum of the hand and was fixed with two K-wires. Trapeziometacarpal dislocation was reduced closed and fixed with a percutaneous transarticular K-wire and 2nd and 3rd metacarpal dissociation were reduced and a percutaneous transmetacarpal K-wire was used to stabilise the intermetacarpal dissociation. A splint was applied for six weeks and at the end of six weeks K-wires were removed and rehabilitation program was initaited.
On late follow-up at the end of 51 months trapezio-metacarpal joint was found to be stable (Fig.3). Opposition was full, radial abduction was 0-45 degrees, palmar abduction was 0-55 degrees. Grip and pinch power could not be compared to the opposite extremity as it was also injured seven years ago, return to original work, lack of pain and normal achievement of daily activities were regarded as criteria for satisfactory long term result.

DISCUSSION

Acute traumatic dislocation of the trapezio-metacarpal joint is an rare entity. Although several injuries associated with trapezio-metacarpal dislocation has been described (1,2,6) this is the first description of dorsal dislocation of trapezio-metacarpal joint associated with proximal intermetacarpal ligament rupture.

Acute dorsal dislocation of trapezio-metacarpal joint is usually caused by indirect mechanism (3,7) where a longitudinal force directed along the axis of the thumb metacarpal with the joint in full flexion. In the case presented here dislocation of the trapezio-metacarpal joint is caused by direct mechanism. Injuries caused by direct mechanism may cause associated pathologies that may be overlooked. Therefore if the injury is caused by direct mechanism the surrounding structures as well as trapezio-metacarpal joint should be carefully evaluated. In our cases 2nd metacarpal fracture associated with trapezio-metacarpal dislocation was apparent whereas the proximal intermetacarpal ligament rupture of 2nd and 3rd metacarpals was not detected on the initial AP/LAT x-rays. Dissociation could be verified by various different plan x-rays.

Trapezio-metacarpal dislocation is a rare injury. In order to recognise the associated pathologies mechanism of the trauma should be evaluated carefully.

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