

TRAPEZOID DISLOCATION WITH A GALEAZZI FRACTURE

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A case of volar trapezoid dislocation and Galeazzi fracture in a 28-year-old man is presented. This case illustrates some of the problems associated with diagnosis and treatment of this rare injury.

Keywords: palmar trapezoid dislocation; Galeazzi fracture.

Mots-clés: luxation palmaire du trapézoïde; fracture de Galeazzi.

INTRODUCTION

Trapezoid dislocations are rare particularly when they are volarly displaced. We report the case of a 28-year-old cyclist hit by a car, sustaining both a volar trapezoid dislocation and a Galeazzi fracture.

CASE REPORT

Mr S N was cycling home late at night when he was hit by a car. He rolled onto the bonnet and smashed his left, non-dominant forearm against the windscreen. He was admitted into hospital and clinically had a forearm fracture and swelling of the carpus with decreased sensation in the median nerve distribution. X-rays confirmed a Galeazzi fracture and a fracture line extending through the base of the 4th and 5th metacarpals and the distal capitate pole with an associated volar dislocation of the trapezoid (Fig 1a & 1b).

He was taken to theatre, the Galeazzi fracture was reduced and held with an interfragmentary screw and plated with a pop plate via a volar approach. The trapezoid was reduced through a dorsal incision and held with 2 Kirschner wires



Fig. 1a & 1b. — AP and lateral x rays of wrist showing a Galeazzi fracture, volar dislocation of the trapezoid with fractures of the base of the 4th and 5th metacarpals and distal capitate pole.

(Fig 2a & 2b). An open forearm fasciotomy was performed through the volar incision to decompress the median nerve. An attempt was made to reconstruct the dorsal ligaments and the arm was then protected in a plaster slab.

Postoperatively there was a neurapraxia of both the median nerve and superficial branch of the

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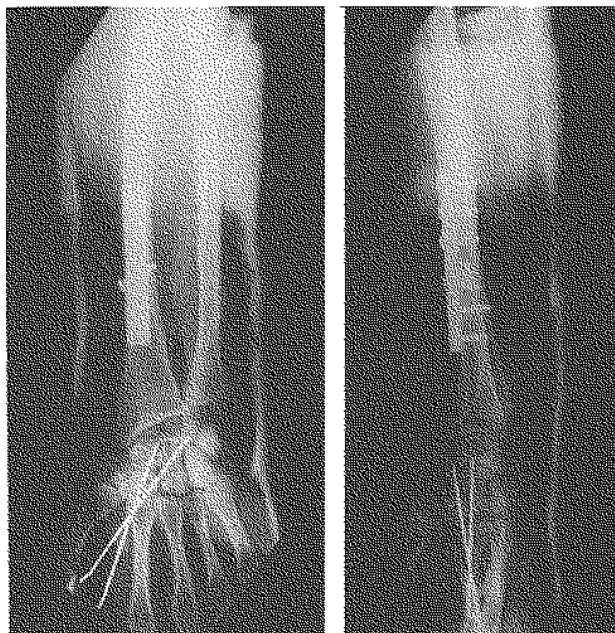


Fig. 2a & 2b. — AP and lateral x rays after open reduction of the radius with a DCP plate and reduction of the trapezoid held with Kirschner wires.

radial nerve. At 4 weeks infection around the Kirshner wires required their removal. The hand was protected for 2 weeks in a plaster slab and for a further 3 weeks in a cast.

At 3 months the wrist was pain free and there was 40 degrees of extension and 50 degrees of flexion. The median and superficial radial nerve had both fully recovered. X rays, however, showed an increase in the scapholunate angle with a suggestion of some avascularity of the trapezoid (Fig 3a & 3b). The patient was able to return to work on computers 3 months after injury.

DISCUSSION

Trapezoid dislocations are rare especially when volarly displaced due to the stronger volar ligaments and the keystone shape of the trapezoid being narrower on the volar aspect (1). There is a 70% associated ipsilateral arm injury associated with trapezoid dislocations, most commonly an injury to the scaphoid, trapezium or metacarpal bases (2). The mechanism would appear to be a forceful hyperextension with supination of the



Fig. 3a & 3b. — AP and lateral x rays at 5 weeks showing an increased scapholunate angle and possible avascularity of the trapezoid.

carpus with subsequent transmission of the force to the radius. Usually this is a high energy injury with disruption of both the carpus and its ligaments.

The initial x rays of our patient showed volar dislocation of the trapezoid with fractures of the base of the 4th and 5th metacarpals and distal pole of the capitate with the trapezium taking up the position of the trapezoid making diagnosis more difficult on the AP view, although this was confirmed on the lateral view.

Postoperative x rays showed a scapholunate angle of 80 degrees, suggesting some disruption of the scapholunate ligament. The Kirschner wires were also removed earlier than ideal due to infection.

A combined dorsal and volar approach has been suggested to confirm a satisfactory reduction

and to allow attempted repair of the ligaments although more commonly a dorsal approach alone has been used (3).

The circulation of the trapezoid is 70% dorsally and 30% volarly (4). In this case the scaphoid was inadequately reduced. A combined approach may have prevented this, but would have devascularised the area more, although avascular necrosis of the trapezoid is uncommon (4). Functionally our patient has made a satisfactory recovery and he has returned to work on computers 3 months after injury.

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SAMENVATTING

M. TAYLOR, D. SHAKESPEARE. Luxatie van het trapezoid geassocieerd aan een Galeazzi fractuur.

De auteurs beschrijven een palmaire luxatie van het trapezoid geassocieerd aan een Galeazzi fractuur bij een 28 jarige man. Dit geval illustreert de moeilijke diagnose en behandeling bij zo'n zeldzaam letsel.

RÉSUMÉ

M. TAYLOR, D. SHAKESPEARE. Luxation du trapézoïde associée à une fracture de Galeazzi.

L'auteur rapporte un cas de luxation palmaire du trapézoïde associée à une fracture de Galeazzi, chez un homme de 28 ans. Ce cas illustre certains problèmes de diagnostic et du traitement de cette lésion rare.