Dorsal lunate fracture-dislocations of the carpus (About 14 cases)

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**ABSTRACT**

Our work is a retrospective study of 14 cases of dorsal lunate fracture-dislocations of the carpus, listed in the service of traumatology and orthopedics of the Ibn Sina Hospital between 2010 and 2014. The back lunar dislocation of the carpus, the most common intra-carpal dislocations, is of interest in most cases of adult male youth, and whose injury was caused in half the time by an accident from the public highway. The diagnosis is only radiological because the clinic cannot be evocative. Surgical treatment was recommended at the outset in all cases. The dorsal approach was performed in 10 cases, and the volar approach was used earlier in one case. Patients were reviewed at a mean of 30 months for clinical evaluation of functional results according to the score of Allieu and Witvoet. The results were satisfactory in all cases reviewed, and only three were lost to view. In conclusion and in light of a literature review, we believe that surgery alone provides a satisfactory reduction and repairs bone and ligament injuries, the only guarantee of a favorable outcome to avoid the long term most serious complication: osteoarthritis of the wrist.

**Keywords**

Dislocation, Fracture, Dorsal, Lunate, Carpus.

**Introduction**

Dislocations peri-lunar show only isolated ligament injuries. Fracture-dislocations are often trans-scaphoid-retro-lunar fracture dislocations. This disease involves multiple ligament and/or bone complex lesions.

The natural history of the disease is a patient who presents with edema and with a sore wrist after a fall on the palm of the hand. Apart from pain, the clinical signs are frustrated. This is why, this lesion may go unnoticed in the absence of radiographs of good quality and good performance by a qualified doctor. Scarcity of this lesion entity that most series are sparse and sometimes with inadequate monitoring which did not allow the authors to give a therapeutic consensus.

This paper reports a series of 14 cases of retro-lunar dislocations that were collected in the trauma unit of Ibn Sina Hospital in Rabat, over a period of 4 years, with a decline from 6 months to 4 years.

**Material and methods**

Our work consists in retrospective study concerning 14 cases of retro-lunar dislocation of the carpus, treated in orthopedic trauma service of Ibn Sina Hospital in Rabat, we were able to collect on a 4-year period from 2010 to 2014 with a decline of 6 months to 4 years.

Among these 14 cases, 11 were reviewed. The comparison of our series with other studies in the literature allows a more objective evaluation of the results at different levels: epidemiological, clinical, paraclinical, therapeutic.

**Results**

Age is the prerogative of the young adults, the average age of our series is around 26 years.

In our series, 10 cases were diagnosed initially, and there was one case of fracture dislocation overlooked.

In our study, surgical treatment seems to be by far the best for peri-lunar dislocation of the carpus, it was recommended immediately for all cases. The dorsal incision was used in 10 cases, and the anterior was recommended in only 1 case. Monitoring in our patients did not reveal any specific effects.

**Discussion**

The age of our patients is around 26 years, which agrees well with the data from the international literature.

The predominance in young adults can be explained by the conditions of injury: falls, traffic accidents, sports injuries and the strength of the distal radius at this age.

During trauma, the maximum stress is absorbed by the carp, and there is a maximum of capsular ligament and bone damage at this level. While in the relatively elderly (beyond fifty), the wrist injuries, performs more readily fractures of the lower end of the radius, which is less resistant because of osteoporosis. It is the same in the child, which has first and foremost, fracture-separation of the lower end or the distal quarter of the forearm, in this case the ligaments are much stronger than bone.

The majority of studies show that peri-lunar dislocation of the carpus usually affects the young man. This is the case in our series.

In our series, the fall is the most common of these dislocations cause, this is correlated with data from the literature. Although the right side is instinctively thrown forward into fall. There were no predominance of the injured side in numerous studies. But in our series, there is the achievement of the left side in 5 cases, and 5 cases for the right side and only 1 bilateral involvement.

The lesion most commonly associated with dislocation-peri-lunar carpal scaphoid fracture is, it is found in August 1 case in our series, but other lesions may be seen as the fracture of the lower end of radius, radial head fracture external cuneenne, and...
metacarpophalangeal joint dislocation. The diagnosis of peri-
lunar dislocation is only radiation, but the pictures are also often
difficult to interpret. This explains the frequency of lesions
initially unknown.

The goal of treatment is to maintain the normal functions of
the wrist. I.e., good grip strength of the hand and a good arc of
flexion-extension, with normal mobility of the fingers. (Fig.1)

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Surgical treatment seems to be, in our series, the most
suitable for peri-lunar dislocation of the carpus.

The single dorsal approach was used in 10 cases, allowing
the reduction midcarpal, the anterior approach in one case. (Fig.
2) [16-20]

Early diagnosis and anatomical reduction retro-lunar
dislocation seem the best guarantee of a favorable outcome.

Closed reduction usually leaves persisting imperfections
that only surgery can correct, while ensuring a good stabilization
and possibly scaphoid pining.

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The opinions of the various authors differ regarding the
factors determining the prognosis of LPLC. This can be
explained by the lack of recoil and limited series. [24-27]

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