



Rare Old Distal Carpal Row Dislocation: Wait, do not Reduce, or Operate

Nadir Eski Distal Karpal Sıra Çıkığı: Bekleyin, Azaltmayın veya Çalıştırmayın

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ABSTRACT

Carpal dislocations most frequently result from high-energy axial loading of the forearm with the wrist extended and can easily be overlooked. In this case, we conclude that stable, chronic dislocations with patient adaptation did not require any reduction or operation.

Keywords: Distal carpal row dislocation, carpal bones

Post-traumatic carpal dislocations are rare entities that most frequently result from high-energy axial loading of the forearm with the wrist extended and can easily be overlooked (1,2). Several variants of carpal dislocations exist. The most commonly observed cases involve lunate wrist trauma (3). If clinicians do not employ a high index of suspicion, they readily miss the diagnosis of carpal dislocations in the emergency department. These injuries can result in persistent pain and stiffness if left untreated. X-rays are the imaging modality of choice in early post-traumatic situations, where carpal dislocations frequently appear with only mild anomalies. If there is a difference between clinical and radiological findings, a computed tomography (CT) scan should be used as a problem-solving tool. The eight carpal bones form a complex structure (two horizontal rows) that enables the wrist to move in three dimensions. To maintain wrist stability, the proximal row is an intercalated section between the radius and the distal carpal row (trapezium, trapezoid, capitate, and hamate) (4). Treatment in the acute setting should always include closure reduction and immobilization to relieve pressure on nearby structures. K-wire may be used in conjunction with immobilization to provide the wrist with more stability after reduction. This was the previously recommended treatment. However, new research has

ÖZ

Karpal çıkıklar çoğunlukla el bileği ekstansiyondayken önkolun yüksek enerjili aksiyal yüklenmesinden kaynaklanır ve kolayca gözden kaçabilir. Bu durumda stabil, kronik, hasta adaptasyonu ile ortaya çıkan çıkıkların herhangi bir redüksiyon veya operasyon gerektirmediği sonucuna vardık.

Anahtar Sözcükler: Distal karpal sıra çıkığı, karpal kemikler

revealed a high incidence of recurrent instability and arthritis. Open reduction is now the accepted standard approach because it has produced superior results for most injuries compared with closed reduction (2).

We report a case of complex carpal injury in a 46-year-old policeman involving dislocation of the entire distal carpal row. He presented to the emergency department with a complaint of tolerable right wrist pain. He allegedly fell on his extended right hand while trying to catch a thief, at which point he started feeling mildly tolerable pain at the wrist joint. What brought him to the emergency department was not pain, but he recalls that the exact mechanism of trauma happened ten years ago while he tried to catch a thief. At that time, he complained of mild pain but never sought medical advice. After a recent trauma, he decided to get a doctor's opinion regarding both traumas. On examination, the right hand showed a bit of extension limitation with mild bulging during hand extension and a pain score of 3/10. A right-hand X-ray was requested and revealed overlapped carpal bones, as shown in Figure 1. A CT scan was requested to obtain more details regarding the carpal bones. Figure 2 shows a CT scan that confirmed total distal carpal row dislocation. Both carpal bone

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Figure 1. Right dorsal view X-ray showing carpal bones with abnormal anatomical alignment.



Figure 2. Right hand 3D volar view CT showing overlapped proximal and distal carpal bones.

CT: Computed tomography.



Figure 3. Cross-sectional CT at the level of the right carpal bones clearly showing overlapping.

CT: Computed tomography.

rows were shown to be on top of each other in cross-sectional CT at the carpal bone level, representing the distal row, which overlapped the proximal row, as shown in Figure 3.

In this case, we can emphasize that stable, chronic dislocations with patient adaptation did not require any reduction or operation and were not considered emergencies that required urgent reduction or manipulation. In conclusion, even if the patient presented to the emergency department with a trauma of the exact mechanism without new findings, we may choose to wait rather than reduce or operate.

Ethics

Informed Consent: It was obtained.

Authorship Contributions

Surgical and Medical Practices: M.M.M.A.C., A.N.S., W.A.W.S., Concept: M.M.M.A.C., A.N.S., W.A.W.S., Design: M.M.M.A.C., A.N.S., W.A.W.S., Data Collection or Processing: M.M.M.A.C., A.N.S., W.A.W.S., Analysis or Interpretation: M.M.M.A.C., A.N.S., W.A.W.S., Literature Search: M.M.M.A.C., A.N.S., W.A.W.S., Writing: M.M.M.A.C., A.N.S., W.A.W.S.

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