Available online at www.elixirpublishers.com (Elixir International Journal)

Orthopedics

Elixir Orthopedics 121 (2018) 51563-51565

ISSN: 2229-712X

Fracture Traumatic Luxation of the Radial Head Associated with a Diaphysary Fracture of Homolateral Radius. About a Case

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ARTICLE INFO

Article history:

Received: 4 July 2018;

Received in revised form:

7 August 2018;

Accepted: 17 August 2018;

Keywords

Radius Fracture-Traumatic Luxation Head, Diaphysary Fracture of Homolateral Radius, Surgery.

ABSTRACT

The association of a posterior dislocation of the radial head with a diaphyseal fracture of the ipsilateral radius is uncommon condition. We report a rare case of a fracture-traumatic luxation of the radial head associated with a diaphysary fracture of homolateral radius in 52 old patient.

1. Introduction

The traumatic dislocation of the radial head is most often associated with of the ulna fracture, Colled a Monteggia fracture. Dislocation of the radial head without fracture of the ulna is very uncommon , only a few cases have been reported [1] indeed. The association of a antero-internal dislocation of the radial head to a diaphyseal fracture of the radius has never been described before in the literature, we emphasis this review in Cochran and Midline Research

2. Observation

M.H a 52-year-old man, with chronic smoking history, right-handed. He suffered a fall of a truck estimated at 2 meters with a reception on the right hand, the forearm in hyper-supiner , hyper-extension elbow causing pain with member upper right functional impotence . Clinically we noted a closed trauma of the right elbow, deformed, with a painful limitation of the mobility, without associated vascular or nerve injury.

The radiological assessment (Figure 1) showed a short oblique medio-diaphyseal radius fracture, associated with antero-internal dislocation of the radial head classified as type 4a according to the Morrey modified Masson classification. The ulna was intact as well as the inferior radioulnar joint. A CT scan of the elbow (Figure 2) was performed to confirm dislocation and to assess the size and number of fragments of the radial head as well as its relationship to the joint. The patient was operated in emmergency.

The reduction of dislocation of the radial head was obtained only after anatomical reduction of the diaphyseal fracture, approached by Henry's anterior approach. The osteosynthesis was performed by a 6-hole screwed DCP plate with an anatomical reduction of the focus. The radial head was fixed with a Herbert screw by a 2nd mini external approach of the elbow, followed by a closure of the annular ligament which made the elbow stable post-reduction. Radiographs showed a radial head in place (Figure 3) with a diaphyseal axis passing through the center of capitellum on all incidences.

The patient subsequently benefited from immobilization by plaster brachio-antebrachio palmar splint for 3 weeks, followed by reeducation. Follow-up was without complications , the reduction of the radial head was stable and the consolidation was obtained at 3 months (Figure 3). Thus, the patient was able to return to work from the fourth month. After 6 months, functional recovery was complete except for a 10 ° loss of extension (Figure 4).

Figure 1. Radiological assessment showed a short oblique medio-diaphyseal radius fracture, associated with antero-internal dislocation of the radial head.

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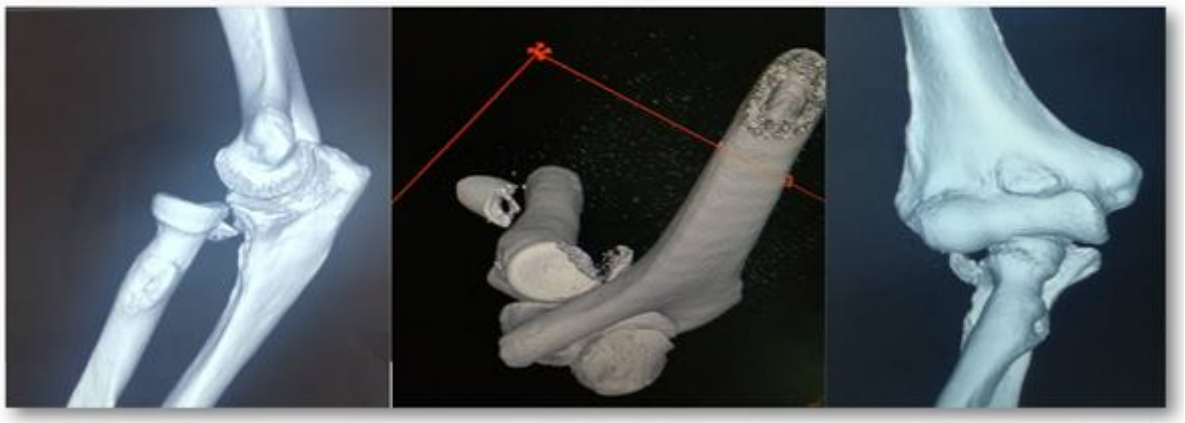

Figure 2. D CT scan of the elbow confirm a dislocation and to assess the size and number of fragments of the radial head.

Figure 3. Radiological assessment after surgery showed a radial head in place with a diaphyseal axis passing through the center of capitellum on all incidences.

Figure 4. Joint amplitude of the patient after consolidation.

3. Discussion

The association of a posterior dislocation of the radial head with a diaphyseal fracture of the ipsilateral radius is uncommon condition. The first case was reported by Simpson et al [2] in 1991. Since then, only 3 cases have been published [3, 4, 5]. The peculiarity that we report in our case is the association of anterior-internal dislocation with a fracture of the ipsilateral head and diaphysis. The cases reported in the literature have shown mainly posterior dislocations presence in the radial head, the mechanism of which was characterized by a hyper pronation of the forearm associated with a hyper flexion of the elbow [1,5,6]. On the anatomo-pathological conditions , Was a rupture of the ring ligament and the square ligament, then of the interosseous membrane up to the fracture site [5]. Thus, for Simpson and Ryu the proximal radial fragment became uncontrollable, which explained the need to resort to reduction by fracture focus. There is a possibility of uncontrollability of dislocation of the radial head (2 cases out of 4) [1,5]. The approach of the upper ulnar ulnar then became necessary to remove the obstacle. Our case described, remains exceptional by the antero-internal location of the dislocation and by the fracture of the head and the radial diaphysis. The anatomical reduction of the fracture focus is the first step of the treatment to reduce dislocation followed by osteosynthesis of the radial head by screwing, the goal of which is to obtain a stable and functional elbow. Complementary immobilization by brachio-antebrachial splint at 90 ° elbow flexion and supine forearm for 3 weeks is necessary for ligament healing [7].

4. Conclusion

Fracture & dislocation The association of a radial head with a diaphyseal fracture of the ipsilateral radius is uncommon condition. The reduction of dislocation was obtained only after bloody reduction of the diaphyseal fracture of the radius followed by internal fixation of the radial head; with a good evolution on a decline of 8 months and recovery of the professional activity.

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