OLD UNREDUCED MEDIAL FRACTURE - DISLOCATION OF THE ELBOW: A CASE REPORT

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Old unreduced fracture - dislocations of the elbow are rare. Posterior dislocations are the most common. Medial or lateral dislocations present with a widened appearance of the elbow and relatively normal lengths of the arm and forearm.

A rare case of unreduced medial elbow fracture - dislocation of three months and its treatment is presented.

CASE REPORT:

40-year-old female villager was referred to our clinic for her left elbow that had no range of motion. She had a fall on her flexed elbow with trauma on its lateral aspect three months ago. A physician saw her in her village with her x-rays (Figure 1) and the injury was evaluated as soft tissue trauma. No reduction was attempted initially and a long arm cast splint was applied for three weeks. The patient had no more treatment for three months before she was referred to our clinic.

The examination of her left upper extremity revealed a fixed elbow joint at 95 degrees flexion with 10 degrees of forearm rotation; stiffness of the shoulder, wrist and phalangial joints. X-ray and CT evaluation of the injured elbow demonstrated medial dislocation of the joint with fractures of the capitellum and radial head (Figure 2 A-B). There was no neurological deficit.

The patient was operated under general anaesthesia and pneumatic tourniquet. Posterior approach was performed. The edges of the incision was undermined and retracted so as to expose the tendinous insertion of the triceps muscle. The ulnar nerve was dissected up from its bed along the groove in the medial humeral condyle and carefully retracted. As the triceps muscle was located medially olecranon fossa was explored easily after performing the orthotomy. The fibrous soft tissues covering the olecranon fossa and the joint surfaces were debrided. Excision of the small fragment of the fractured capitellum that was displaced anteriorly was preferred. Expansive release was achieved by stripping the capsule and the fibrous tissues both anteriorly and posteriorly with blunt dissection. The joint was gently reduced without undue force. The elbow had full range of motion, but the pronation or supination of the forearm was forcing the joint to subluxate because of the deformity of the radial head. Excision of the radial head improved the stability of the joint. The capsule was repaired carefully, securing the stability of the joint. The ulnar nerve transposed anteriorly and the wound was closed after releasing the tourniquet and securing all major bleeders. A compressive elastic dressing was applied.

A permanent catheterisation for axillary brachial plexus block was performed on the second day of the operation to eliminate pain for passive range of motion exercises and the patient was discharged. A physiotherapist daily rehabilitated her. The catheter was changed with three days' intervals and the catheterisation was ended at the end of ten days. Active exercises to gain muscle strength were applied in the second week, as the elbow was stable in extension, flexion, pronation and supination. Indomethacin 150 mg per day was ordered for three weeks. The patient had rehabilitation both for her reducted elbow and stiffened joints for eight weeks.

After 17 months of follow-up, the examination of the elbow revealed; 70 degrees of pronation, 60 degrees of supination, 130 degrees of flexion with 20 degrees loss of extension with good muscle strength without any instability. She could use her left upper extremity for her daily needs even for the farm-work (Figure 3 A-B).

DISCUSSION: Old Unreduced medial fracture-dislocation of the elbow is a very rare entity and has not been reported before. In our knowledge, most of the reported cases of old unreduced dislocations of the elbow are posterior ones. Many of the medial dislocations are the result of incompletely reduced posterior dislocations, but our case was a medial dislocation initially. However there was a serious injury, it was neglected and even not consulted to a specialist, may be because the deformity of the elbow in medial or lateral dislocations is relatively normal in appearance and length.

One of the major problems in the treatment of such kind injuries is the instability of the joint. A hinged external fixator and/or ligament reconstruction in addition to bony reconstruction would be necessary [6]. As we were satisfied with the stability of the elbow in our case per-operatively, no more process was attempted. Open reduction undertaken within three months of the injury, with extensive release of the elbow capsule and soft tissues may have acceptable results. As we observed in our case, excision of the deformed radial head improves the stability. Arthroplasty can be preferred in cases after six months of the injury with the consideration of age and activity levels of the patient [2]. Lengthening of the triceps muscle would also be necessary for late unreduced posterior dislocations [3]. In our case, we had an acceptable result with early passive motion that was supported by an axillary catheter.