

DISTAL HUMERUS RECONSTRUCTION USING IPSILATERAL RADIAL HEAD AUTOGRAFT FOR TREATMENT OF NEGLECTED COMPLEX ANTERIOR ELBOW DISLOCATION: A CASE REPORT

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Introduction: Neglected dislocation is defined as that is left unreduced for more than 3 weeks. Dislocations with fractures are termed complex dislocations. Most authorities advise for arthroplasty or arthrodesis after 3 months duration. Arthroplasty is not considered in this patient due to young age. Arthrodesis is not well accepted in patients especially the young and not manual laborers.

Discussion: A 20 years old right-handed male student presented with restricted motion of the right elbow. He had a fall while he was 2 years old; his right elbow was assumedly fractured and dislocated. For the past 18 years, he has adapted well functionally. However, for the past few years, he had deteriorating strength, stability, and range of motion of his elbow. The elbow is deformed with disruption of its equilateral triangle. The elbow flexion-extension arc is 80°-120° and forearm pronation is 15°. There is no supination. On the plain radiograph, noted anterior dislocation with pseudo-arthrosis of the elbow. Intra-operatively, there was malunion of humeral lateral condyle and non-union of medial condyle, which was fixed with K-wire. The radial head was excised, refashioned as a trochlear, and transfixed with K-wire into the medial part of the distal humerus and articulating with the proximal ulna. A unilateral hinged external fixation and splint were applied. Passive ROM exercise was started 1-week later, followed by active ROM exercise 3 weeks later. After 3 months, the hinged external fixator and K-wire were removed. At 1 year follow-up, he has a stable elbow with improving flexion-extension arch to 15°-135°, pronation 45°, and supination 90°. DASH Score was improved from 27.58% (pre-operative) to 8.3%.

Conclusion: Despite the severity and chronicity of the injury, this de-novo elbow reconstruction technique still able to regain a good range of motion for the elbow. However, the outcome is greatly dependent on physiotherapy.