

COMMUNITED FRACTURE DISTAL HUMERUS IN ADOLESCENCE DILEMMA

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Introduction: Distal humerus fractures are a common presentation in children however, comminuted intraarticular fracture of the distal humerus is rare. Mainstay treatment of distal humerus fracture in children is well established however in adolescent age, maintaining the integrity of medial and lateral columns through k wire alone shown to be difficult.

Discussion: We reported a case of 13 years old lady, alleged motor vehicle accident, and sustained comminuted fracture distal 1/3rd humerus (AO-C2) with radial nerve neurapraxia. She was initially treated with open reduction and k wire of distal humerus however noted loss of reduction of the fracture fragment. Thus, we proceed with revision surgery with open reduction and dual recon plate via triceps reflecting approach. Intraoperatively, noted split in lateral condyle with medial comminution. Post operatively, she was immobilized for a short period before started aggressive physiotherapy. The radial nerve neurapraxia recovers after 6 months and she shows a progressive improvement of elbow range of motion and hand function. At 1 year follow-up, her elbow range of motion was 0'-100'. Oxford elbow score 41/48 which is excellent and Mayo elbow performance score at 75% which is good.

Conclusion: Management of distal humerus fracture in the pediatric population is well established with close reduction and percutaneous pinning. Thickened periosteum in skeletally immature patients aid in fracture stability, however in adolescence age, maintaining the integrity of medial and lateral columns through k wire is difficult, hence, open reduction and internal fixation in comminuted fracture and elder children were preferred. Open reduction and internal fixation are the mainstay of management for this fracture pattern with goals of restoring joint congruity while maintaining medial and lateral column integrity. Reconstruction plates are ideal for fixation in adolescence age as it can be contoured to match the pediatric bone.