



## MANAGEMENT OF COMMUNUTED RADIAL HEAD FRACTURES: A CASE REPORT

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<p><b>Article Info</b> <i>Received 15/01/2015</i> <i>Revised 27/02/2015</i> <i>Accepted 20/03/2015</i></p> <p><b>Key words:</b> Fracture, Radial head, Management.</p>	<p><b>ABSTRACT</b> Fractures of radial head can present difficult problems in the management. If the head is comminuted and is associated with Mason type IV and Essex Lopressti injury to forearm, simple excision of the radial head may lead to instability of the elbow joint and painfully restricted movements of the wrist. Management should be aimed at achieving the normal anatomy so that the function of elbow, radio-ulnar and wrist joints will be restored to a satisfactory level. We would like to present a case report where a patient with comminuted fracture of the radial head with dislocation of the elbow was managed with metallic head replacement.</p>
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### INTRODUCTION

Fractures of radial head can present difficult problems in the management. If the head is comminuted and is associated with Mason type IV and Essex Lopressti injury to forearm, simple excision of the radial head may lead to instability of the elbow joint and painfully restricted movements of the wrist. Management should be aimed at achieving the normal anatomy so that the function of elbow, radio-ulnar and wrist joints will be restored to a satisfactory level. Our patient in this case report was informed, that the details of the management would be submitted for publication.

### CASE REPORT

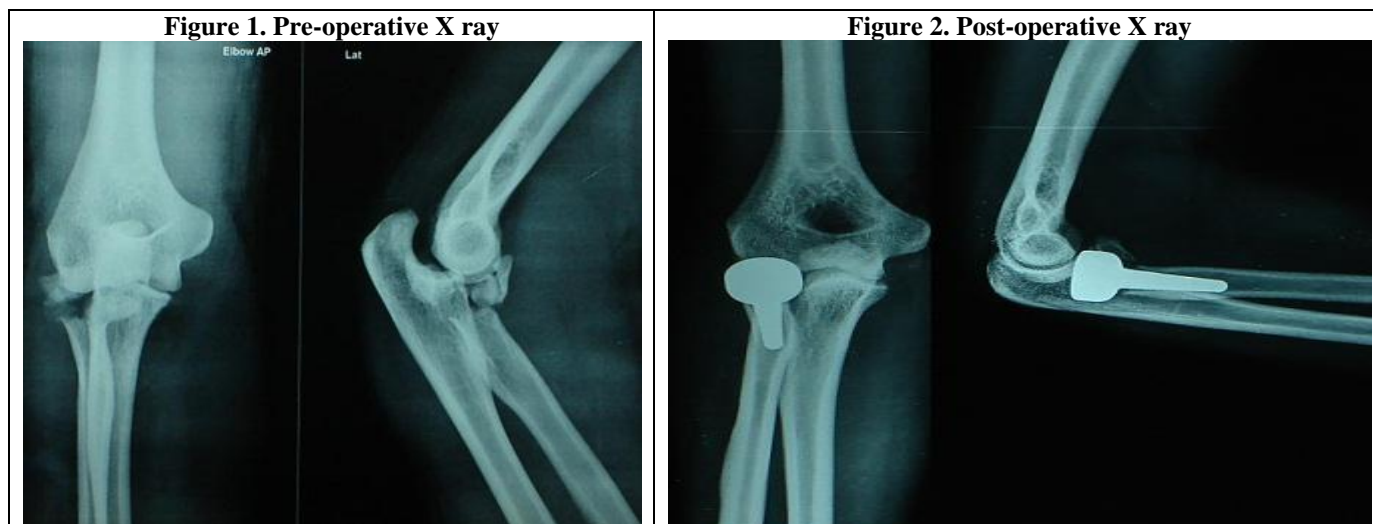
A 30 year old gentleman was admitted following a road traffic accident with injury to his right upper limb. He had an elbow deformity with pain over forearm down to the wrist. He has mild fullness over volar aspect of the forearm with tenderness over the dorsum of the distal radio ulnar joint and wrist joints with limitation of movements. X-rays confirmed dislocation of the elbow joint with a comminuted, displaced fracture of the radial head and fracture of the tip of the coronoid process.

There was no gross dislocation at the distal radio ulnar joint on x-ray. Surgery was done under brachial block. Dislocation was first reduced. Radial head was exposed through postero lateral approach. It was found to be too comminuted to fix and was excised. There was about 3-5 mm of linear translatory movement between the radius and ulna confirming the axial forearm instability. Radial neck was prepared and chrome cobalt (Corin) radial head prosthesis was implanted. There was no valgus instability after reducing the radial head suggesting the integrity of medial collateral ligament. At 90° of flexion elbow joint was stable and hence no attempt was made to fix the small fragment of coronoid process. Elbow was immobilized at about 100° of flexion and forearm in full supination to maintain maximum interosseous space.

Active and active assisted movements were started after 3 weeks. Eight months following the procedure, patient has complete range of flexion and extension.

There was terminal restriction of both supination and pronation which is still improving. Elbow joint is stable and has no pain at DRUJ or wrist joint.





### DISCUSSION AND CONCLUSION

Resection of the radial head for simple fractures has been shown to give satisfactory long term results [1,2]. However unrecognised complex injuries with elbow or axial forearm instability may be responsible for unstable elbow, proximal migration of radius, with or without chronic wrist pain [3]. Silicon radial head prosthesis did not offer rigid stability. Proximal migration of the radius progressed with break-up of the implant and subsequent

synovitis [4,5]. Metallic radial head offered better stability against valgus forces at elbow and axial forearm instability [6-8]. However over stuffing of the Radio capitellar joint must be avoided, as it may produce Capitellar erosion especially when done as a late reconstructive procedure for chronic wrist pain [9]. Even though the role of radial head prosthesis in stabilising the elbow and axial forearm instability seems well proven, it is being used less often than indicated.

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