Ipsilateral Proximal And Distal Radius Fractures With An Unstable Elbow Joint: Which Should We Address First?

[1]Akmal Kamaludin NA, [1]Kamudin N Azree F, [1]Mohd Ariff MA, [1]Sapuan J
[1]Orthopaedic Department, Universiti Kebangsaan Malaysia, Pusat Perubatan Universiti Kebangsaan Malaysia

INTRODUCTION:

Fractures of the proximal or distal radius are common injuries of the forearm accounting for 14% and 17% of all adult extremities in casualty (1,2). However, simultaneous ipsilateral occurrences of these injuries are an uncommon occurrence.

CASE REPORT:

A 68-year-old lady sustained an ipsilateral fracture of the right radial head Mason type IV and distal end radius associated with posterior elbow dislocation following a fall from stairs. Clinically her elbow and wrist were deformed. The forearm neurovascular was intact. Closed manipulation reduction was attempted in casualty, however, the elbow was unstable. The upper limb was held with a back slab. We decided to address the distal radius first with an anatomical locking plate followed by the radial head using radial head replacement. The capsule and annular ligament were repaired. The range of motion of the elbow was impingement-free. Postoperative the elbow and wrist were immobilized in an above elbow plaster slab for 2 weeks before the range of motion exercises were started. She was assessed at 3 months postoperatively and noted to have a Cooney score of 75.

DISCUSSIONS:

The best option for treating the severely comminuted radial head fracture was limited to radial head replacement. Rotational malposition and postoperative proximal migration of the radius are the common complications in radial head arthroplasty. To prevent malposition of radial head arthroplasty, we addressed the distal end of radius first to restore the radial height and obtain an anatomical reduction of the intraarticular fragments. By restoring the distal end radial height helped us decide on the radial head prosthesis length size. Too short a length would have an inadequate offset at the elbow joint leading to instability of the joint and radiocapitellar instability whereas too long a length would have led to overstuffing. Anatomical reduction of the fragments allowed us to get a correct alignment of Lister's tubercle which was vital for us to use to get the correct rotation of the radial head prosthesis.

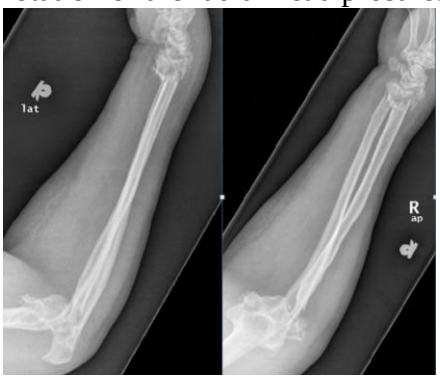

Figure 1.

Figure 2.

Figure 1. the x-ray of right radius and ulna
Figure 2. the x-ray post instrumentation

CONCLUSION:

Ipsilateral distal end radius and proximal end radius fractures are uncommon injuries. Since ipsilateral fractures of the radial head and distal radius are uncommon, we present our thoughts on which fracture should be addressed first.

REFERENCES:

1. Neuhaus V, Christoforou DC, Mudgal CS (2015) Radial Head Prosthesis Removal; a Retrospective

ABSTRACT TRUNCATED