

## A RARE CASE PRESENTATION OF PLATE BREAKAGE IN DISTAL RADIUS FIXATION POST CORRECTIVE OSTEOTOMY FOR MALUNION

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**Introduction:** Volar plate fixation for distal radius fracture is commonly performed. Plate breakage is an uncommon complication. There are limited number of cases reported in journals and literatures regarding plate breakage especially following distal radius corrective osteotomy. We present a case of 24-year-old gentleman who presented to us in June 2020 with an Open extra-articular fracture of distal right radius and ulna, done wound debridement of right radius ulna and k-wire fixation over radius and ulna. 1 month post fixation, we decided to remove the k-wires after improvement seen in serial radiographs. However 3 months post removal of k-wire, patient presented with volar angulation deformity over the right wrist where radiographs showed malunited distal radius fracture. We proceeded with Corrective osteotomy and distal radius plating on December 2020 and post-operative x-ray was acceptable. However 1 month (January 2021) post corrective osteotomy, patient presented again with volar angulation deformity. To our surprise, radiograph showed plate breakage with fracture and osteotomized site angulated volarly as per previous malunion features. The patient subsequently underwent revision surgery by removal of implant over right radius, iliac bone grafting and distal radius locking plate over right radius. Post operatively, the forearm was immobilized in a plaster cast for 1 month.

**Discussion:** At 2 months post revision surgery, fracture had showed signs of union clinically and radiologically. Wrist range of motion was around 70° flexion-extension with all movements being painless. His grip strength was 70% of the opposite wrist and he restarted his job under light duty.

**Conclusion:** Volar plate radius fixation are generally safe and easily applied, however they are not without complications. Both biological and biomechanical factors have to be considered on type and mode of plate to be used and duration of immobilization. Attention to avoiding stress risers during fixation will help lessen complications.