

## Interlocking Nail (ILN) Radius and Ulna as a Means of Minimally Invasive Surgery of Forearm

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### INTRODUCTION:

Diaphyseal forearm fracture have been traditionally treated with plate-screw osteosynthesis, however it requires a large wound opening and periosteal stripping. Interlocking nail is an option as a minimally invasive procedure. We report 1 case that has been treated with ILN of radius and ulna.

### REPORT:

Patient A had sustained open fracture midshaft right radius and ulnar (Gustillo Type 2), closed fracture base of 2<sup>nd</sup> metacarpal bone and closed segmental fracture midshaft right humerus. He was deemed unsuitable for plating of radius and ulna due to the underlying skin condition and the fact that the fracture is segmental. He was brought into surgery for wound debridement of right forearm with ILN right radius, ulna, and humerus and plating of right 2<sup>nd</sup> metacarpal bone. Patient was started on physiotherapy 2 weeks post operation. During 2 months follow up, on radiological examination, fracture shows union however complicated with radioulnar synostosis. There is slight limitation on pronation (0°-85°) and supination (0°-65°) however patient is satisfied with the functional outcome.



Figure 1: Trauma xray

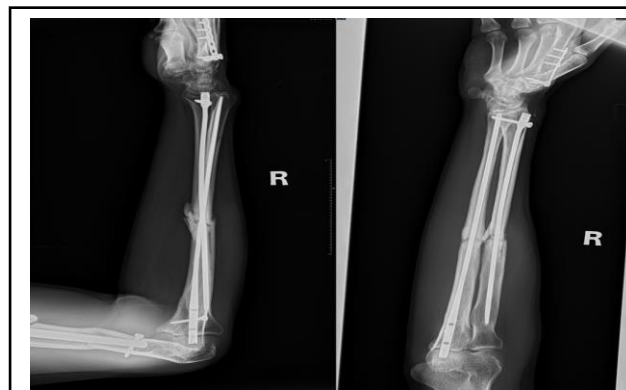


Figure 2: Postoperative xray

### CONCLUSION:

Recently developed forearm nails require limited soft tissue dissection of the fracture area. They are now contoured and have options for both or either distal or proximal locking screws. This allows relative stability, rotational and axial stability, restoration of radial bow and early return of range of movement.<sup>[2]</sup> The frequency of synostosis after nailing has been reported to be lower (0%-6.2%) compared to plating (0%-8%).<sup>[3]</sup> Our result is consistent with reported literature that shows good functional outcome with ILN of radius and ulna. ILN can be considered as a means of minimally invasive surgery in forearm fractures.

### REFERENCES:

1. Saka G, Saglam N, Kurtulmuş T, Avcı CC, Akpınar F, Kovacı H, Celik A. New interlocking intramedullary radius and ulna nails for treating forearm diaphyseal fractures in adults: a retrospective study. *Injury*. 2014 Jan;45 Suppl 1:S16-23.
2. Azboy I, Demirtaş A, Alemdar C, Gem M, Uzel K, Arslan H. A Newly Designed Intramedullary Nail for the Treatment of Diaphyseal Forearm Fractures in Adults. *Indian J Orthop*. 2017 Nov-Dec;51(6):697-703