

Paediatric Radial Neck Fracture: Reduction Technique and Fixation

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INTRODUCTION:

Metaizeau introduced a minimally invasive intramedullary pinning technique to address paediatric radial neck fractures. We present a case of paediatric radial neck fracture treated with a combination of Metaizeau and Kapanji reduction techniques.

REPORT:

An eight-year-old child presented with a fall where she fell with elbow in flexed position. Clinically there was tenderness over radial aspect of elbow. Plain radiograph showed a displaced Judet IV fracture.

Patient underwent surgery where identified the entry point for the Titanium Elastic Nail (TEN) at the lateral aspect of distal radial physis. TEN was introduced into medullary canal and advanced till the tip reached the displaced epiphysis. As the radial head was completely displaced and lied parallel to the metaphysis, reduction was assisted using another Kirschner wire from the lateral aspect. It was used as a lever arm to reduce the fracture- Kapandji technique. The fracture was subsequently stabilized when the TEN was advanced further to engage the epiphysis and turned 180 degrees around its axis to relocate the radial head.

The arm was immobilized with an above elbow backslab which was then removed three weeks post op. At twelve weeks post op, the radiographs showed fracture union and she had comparable range of motion to the healthy side.



Figure 1: K-wire used as lever arm to elevate and reduce fracture (Kapandji Technique)

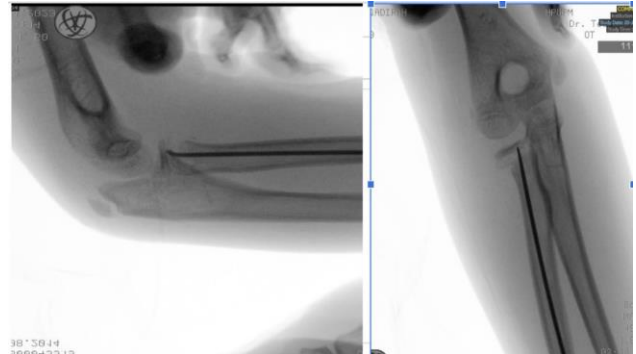


Figure 2: Fracture reduced and fixed with single TENS wire

CONCLUSION:

Metaizeau technique is preferred as it does not violate the physis and avoids the undesirable sequelae associated with open reduction and internal fixation. Tarak et al reported radiological and clinical union at 6 weeks in all 8 of its subjects. The same study said patient had comparable range of motion of the elbow with the healthy side. This along with the Kapandji reduction technique is an effective treatment choice in displaced paediatric radial neck fractures.

REFERENCES:

1.Paediatric Radial Neck fixation by Metaizeau technique. Tarak et al. Journal of evidence-based medicine and healthcare, April 2021