

## Elastic Stable Intramedullary Nailing for Paediatric Radial Neck Fracture

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### INTRODUCTION

Closed reduction and fixation of displaced paediatric radial neck fractures (Judet type III & IV) could be achieved by either percutaneous pinning or using elastic stable intramedullary nailing (ESIN). Certain complex cases may require open reduction. We would like to report a case of closed right radial neck fracture (Judet IVa) which was treated using ESIN, following a technique described by Metaizeau.

### REPORT

An 8-year-old boy presented to the emergency department following a fall whilst playing at the park. He complained of persistent pain at the right elbow with limited range of motion. Initial trauma radiographs of the right elbow showed a displaced radial neck fracture, and a minimally displaced proximal ulna fracture.

Both fractures were percutaneously fixed with ESIN. The radial neck fracture was reduced and fixed using Metaizeau Technique. Initial closed reduction of the radial neck using the surgeon's thumb is followed by nail advancement, catching the proximal radius. Subsequent rotation of nail reduces the radial neck to achieve correct anatomical position.

### DISCUSSION

Displaced paediatric radial neck fractures requires surgical intervention. Closed and open methods of fixation have been described in various literatures. Closed techniques have fewer complications. The Metaizeau technique is however not suitable for Salter-Harris I fractures because fracture would be displaced during nail insertion. Furthermore, the elbow needs to be immobilized post-operatively and requires implant removal upon union.

### CONCLUSION

Percutaneous techniques in fixation of displaced radial neck fractures are useful. Failed closed techniques and complex fractures warrants an open reduction with meticulous care of soft tissues and neurovascular structures.

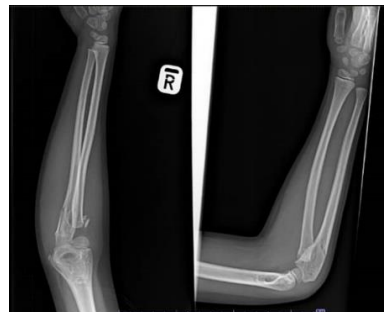


Figure 1. Trauma x-rays of the right elbow showing a displaced radial neck & undisplaced proximal ulna fractures.

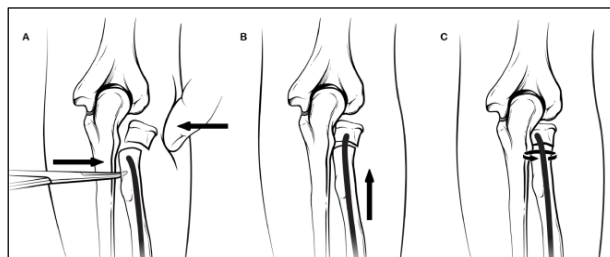


Figure 2. Illustrated Metaizeau Technique<sup>1</sup>

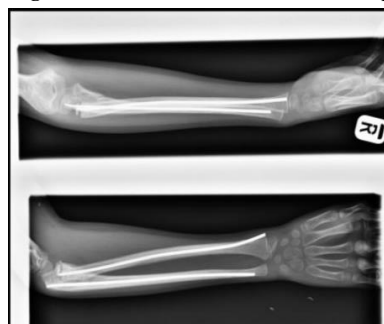


Figure 3. Post operative x-rays

### REFERENCES

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