Functional Outcome in a Series of Fifty Supracondylar Fracture Humerus Managed with Lateral Versus Crossed Percutaneous Pinning

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Introduction

- Supracondylar fractures are a common elbow injury in children
- Account for 16% of all pediatric fractures
- Associated with morbidity due to malunion, neurovascular complications and compartment syndrome

Aims and Objectives

To study functional outcome using Flynn's criteria in a series of 50 Type III supracondylar fracture humerus in children managed with closed reduction and K-wire fixation using either two cross or two lateral wires in a parallel or divergent configuration

Material and Methods

- The study was conducted in a tertiary care military hospital from July 2019 to July 2020
- Study design was retrospective in nature
- 50 children were included in the study having closed type III Supracondylar fractures of humerus
- They were treated either with medial-lateral pin fixation (n = 10) or with 2/3 lateral pin fixation (n = 40)
- All patients were operated under general anaesthesia
- Followed up for a mean of 1 year

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Preoperative X-rays

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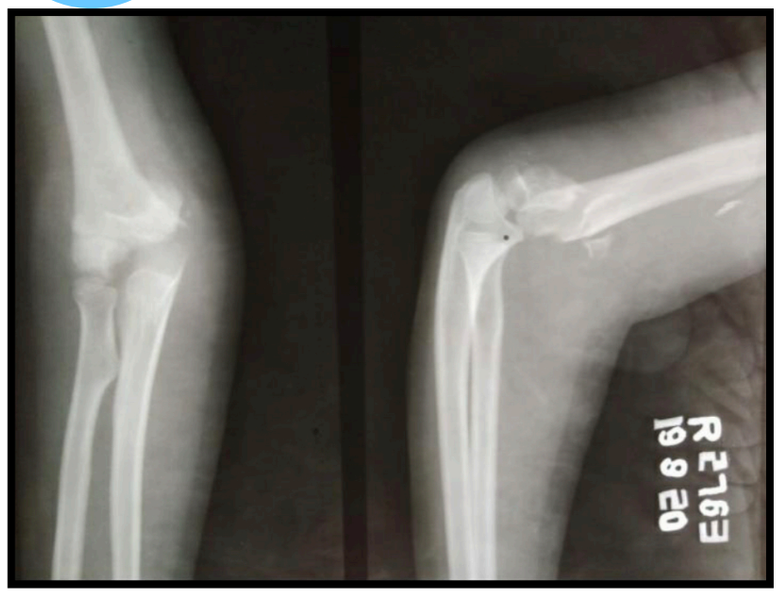
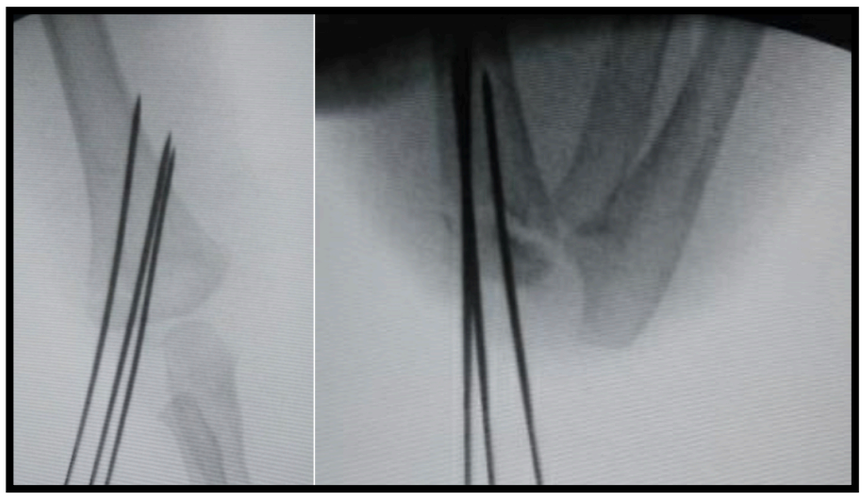
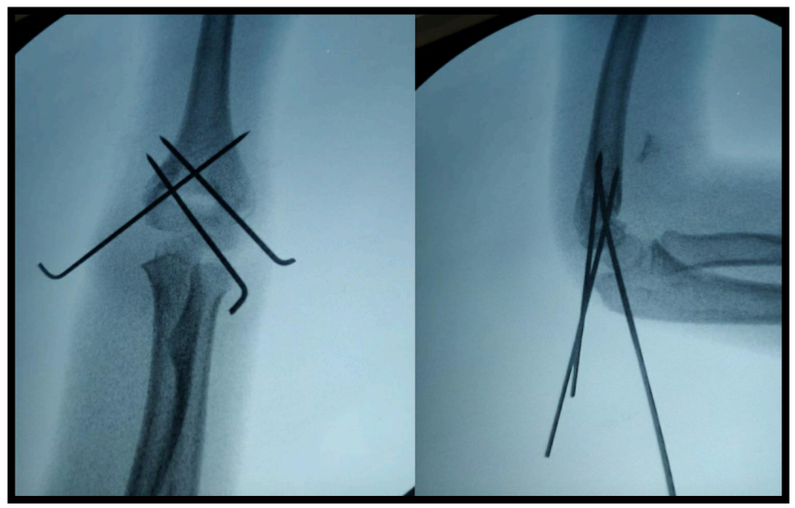
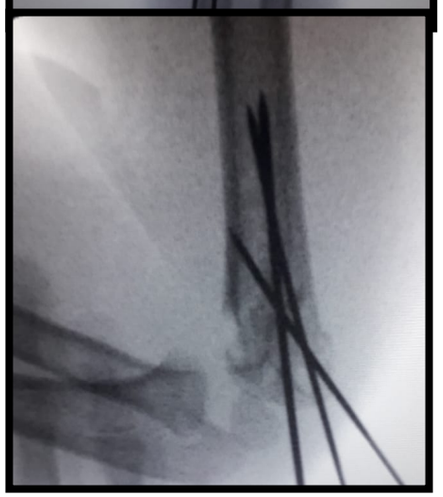
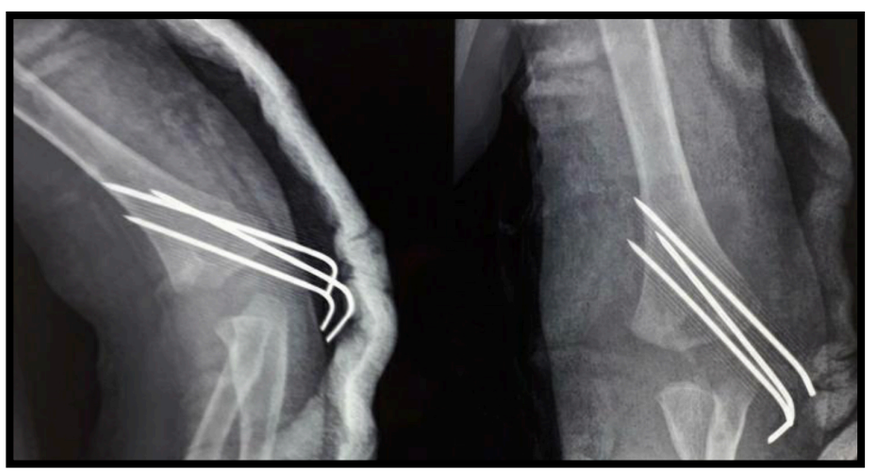


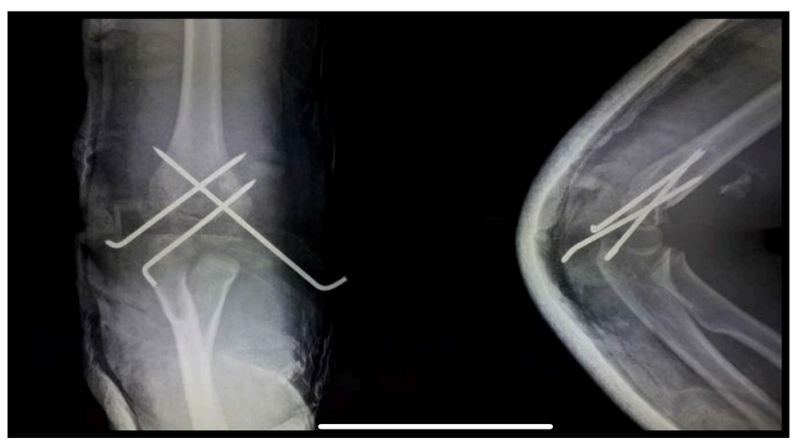
Immediate post operative X-rays











Results

- All children achieved union in a mean time of 4 weeks (range: 3-6 weeks)

- Post-operatively, one patient (2%) had ulnar nerve injury (managed with cross K wire fixation) and one (2%) patient had pin tract infection

- Comparison between two groups such as cross K-wire group (10) and lateral K-wire group (n = 40) by using the Chi Square Test showed that in case of 8 weeks with (P-values = 0.76), in 16 weeks (P = 0.86) and 24 weeks (P = 0.55) with respective excellent, good, fair and poor categories were not found statistically significant

Conclusion

- Lateral percutaneous pinning technique of displaced Supracondylar fractures of the humerus offers a viable alternative to the crossed pinning group as it offers the same stability and similar functional outcome without the incipient risk of iatrogenic ulnar nerve injury

- However if done carefully both the techniques offer excellent results with similar complication rates (as in our study)

Refrences: Nerve injuries associated with supracondylar fractures of the humerus in children Kwok et al Bone Joint J 2016;98-B:851–6