

Paediatric Hahn-Steinthal Fracture: A Case Report

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INTRODUCTION:

Fracture of the humeral capitellum is rare, accounting for only 1% of all elbow fractures and 6% of distal humeral fractures. In the paediatric age group, these fractures are even more unusual and only a handful of cases have been reported in the literature. This is mainly due to the cartilaginous composition of the capitellum, rendering it more resistant to stress. We present a rare case of paediatric capitellar fracture which has been successfully treated with surgical intervention.

CASE REPORT:

Ms NB, an 11-year-old, right hand dominant girl, presented with pain at her left elbow after a fall on her outstretched left hand while riding a bicycle. Plain radiographs of the left elbow revealed a capitellar fracture Bryan-Morrey type I (Hahn-Steinthal fracture).

An open reduction was performed via a posterolateral approach. The fracture was identified, reduced and stabilized with three percutaneous Kirschner wires. Post-operatively, the elbow was protected with a backslab for 2 weeks which was then followed by active range of movement exercises. Kirschner wires were removed on the 6th week post-operation. Finally, the fracture united and she recovered well with an excellent outcome based on Mayo elbow score of 95.



Figure A: Initial plain radiograph of the left elbow shows a capitellar fracture on the lateral view.

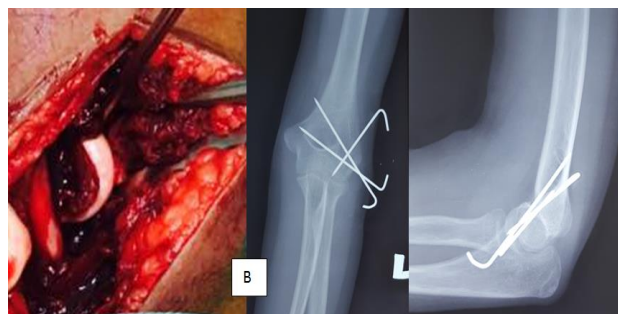


Figure B: The patient undergoes open reduction and K-wiring of the left elbow.

DISCUSSIONS:

In children less than 12 years of age with unfused epiphyses, capitellar fractures can often be mistaken as growth plates. Plain radiographs in antero-posterior (AP) view can be normal in some cases. Most of the time, the diagnosis can be made with a plain radiograph in the lateral view.

Due to its rarity, treatment options of capitellar fractures vary. A capitellar fracture can be treated conservatively, closed reduction and immobilization or open reduction and fixation. In our patient, we use three 1.6 mm Kirschner wires to stabilize the fracture fragment. We suggest that implants should be removed whenever possible once the fracture has united. Kirschner wires can be easily removed in the clinic setting without any difficulty. Our patient subsequently recovers with an excellent outcome.

CONCLUSION:

A high index of suspicion is needed to diagnose a capitellar fracture in a paediatric patient. Open reduction and percutaneous Kirschner wiring of type I (Hahn-Steinthal) capitellar fracture yields an excellent outcome.

REFERENCES:

1. PG Murthy et al. Capitellar Fractures in Children and Adolescents. *J Bone Joint Surg Am* 2017;99:1282-90.

