

TRIPLANE FRACTURE OF DISTAL FEMORAL PHYSIS : A RARE CASE IN PAEDIATRIC POPULATION

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INTRODUCTION:

Triplane fractures of the distal femur is uncommon among the paediatric population [1].Fractures involving the distal femoral growth plate account for just over 5% of all physeal injuries and <1% of all fractures in children [3]. Triplane fracture is defined as a fracture in the sagittal, coronal, and axial anatomic planes and it's a complex occurrence including the metaphysis, physeal, and epiphysis of a long bone. It includes multiple aspects of long bone fracture and is a frequent diagnostic roadblock. Epiphysis-related fractures require accurate reduction to reduce the risk of growth disruptions, limb shortening, or any obvious angulated deformity.

REPORT:

Our article discusses a case of 11 years old, obese Malay boy weighing about 60kg, sustained right knee injury postfall bicycle skidded. As the bicycle slipped while he was riding it in the rain, he fell to his right and received a direct impact on the right knee . Patient was assessed in Emergency Department and done xray and CT right knee demonstrated a comminuted distal femur triplane fracture .This included a distal femoral Salter-Harris IV injury in the coronal plane in conjunction with a widely displaced lateral femoral condylar Salter-Harris III injury, in both the sagittal and axial planes (Figure 1).Due to the seriousness of the injury, the patient was taken to the operating theatre for an open reduction and internal fixation as well as a cross-knee external fixation(Figure 2).Proven orthopaedic principles necessitate restoring articular congruity and stabilising epiphyseal fragment anatomical reduction was achieved and internally fixed with screws and K-wires.

CONCLUSION:

The aim of this case is to contribute to the meagre studies done about the approach and management of triplane fractures in paediatric population as it is not common and not seen frequently and sequence of reduction as key for adequate treatment of the fracture described [3].



Figure 1: Preoperative computed tomographic scan sagittal, coronal, and axial views demonstrate comminuted distal femur triplane fracture



Figure 2: Immediate Postoperative Radiograph

REFERENCES:

1. Triplane Fracture of the Distal Femur in the Paediatric Population: Carroll P, McGoldrick N, O'Toole P.Cureus. 2020
2. Triplane fracture of the distal femur: Julio Javier Masquijo 1, Victoria Allende Pediatr Orthop 2011