

# Rare incident of Tri-Plane Epiphyseal Fracture of Distal Femur in a 11 year Old Boy

Syed N.S <sup>(1,2)</sup> Nor Azman MZ <sup>1</sup>

1. Orthopedic department University Sains Malaysia

2. University Malaysi Sabah

This is an interesting case of a 11Year Old Boy who presented with a traumatic pain and swelling over his Right knee falling from a bicycle. He was slightly overweight at 62kg, otherwise he did not have any wounds neither did he have any medical illnesses.

## MATERIALS & METHODS:

Initial X-Rays done for this patient noted to have a Epiphyseal plate injury., but on further evaluations as well as clinical assesment of his knee revealed a more peculiar presentation of the fracture configuration. To better evaluate the fracture configuration to aid in fixation plans and further management of his injury we had proceeded with a CT Scan of his Right Knee. From the scans we were able to appreciate a Tri-Plane pattern of a Type 4 Salter Harris Epiphyseal injury of the Distal Femur.

## RESULTS:

From the CT Scans conducted ,it was confirmed that He had sustained a Salter Harris Type 4 Epiphyseal fracture of the Distal Right Femur and the evaluation of the fracture configuration has shown a Tri-Plane pattern of injury.

## DISCUSSIONS:

Limited reported cases on Tri-Plane fracture of the Distal Femur in the pediatric s and adolescent group makes it a very rare incident. 16-18 years old is the average fusion time for the Distal Femur in males. Less energy and a higher rate of injuries occur in adolescents comparatively to a child in view of the thicker Perichondral ring and Periosteum. The high energy twisting

mechanism of fall from the bicycle explains this injury

## INTRODUCTION:

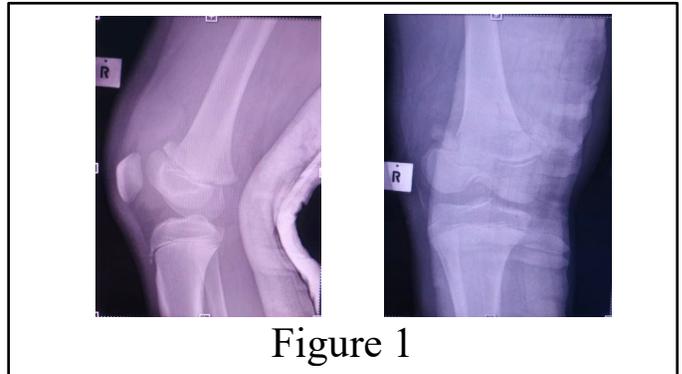


Figure 1

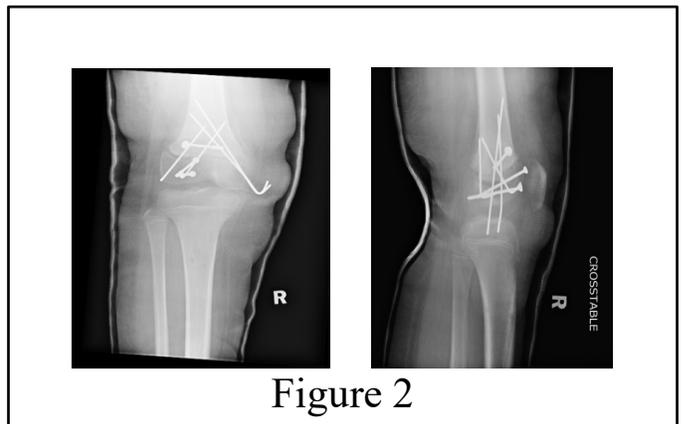


Figure 2

**Figure 1: AP and Lateral x-rays post trauma**  
**Figure 2: AP and Lateral Xrays post fixation**

## CONCLUSION:

Although the Tri-Plane pattern is more commonly been seen at the distal Tibia, this rare fracture configuration of the Distal Femur was surely an interesting case to be highlighted and managed.

## REFERENCES:

1Triplane Fracture of the Distal Femur in the Paediatric Population: A Case Report and Literature Review  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7182168/#>