

## The Femur Jigsaw Puzzle; A Case Report on A Comminuted Supracondylar and Intercondylar Femur Fracture

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### INTRODUCTION:

Fractures of high energy mechanism injuries especially in the case of supracondylar and the intercondylar region of the femur are usually challenging for fixation<sup>1</sup>. They are often comminuted and extend intraarticularly causing restoration of alignment, rotation and reduction of the articular surface by anatomical reduction challenging even to the most experienced of surgeons<sup>2</sup>.

### REPORT:

A 30 year old gentleman presented to the emergency department for an alleged motor vehicle accident. His motorcycle allegedly hit the divider and he fell to his left side over his left knee. In Ed his GCS is full, sustaining a transverse laceration wound over the anterior aspect of left knee measuring 7 cm x 5cm, exposing muscle and bone. X-ray and CT images were obtained and a diagnosis of Open comminuted fracture of distal end of left femur with intercondylar split (Gustilo 3a). He was planned for a 2 stage surgery whereby wound debridement, wound exploration and intercondylar screw fixation, arthrotomy washout together with a high tibial pin insertion will be done first and would later on plan for Variable angle distal femoral plating with bone graft.

Stage 1 op was done, post operatively diagnosis was changed to open comminuted fracture left femur with intercondylar split and bilateral Hoffa fragment. Intraoperatively, K-wires were used to reduce the fragments and 6 cannulated screws were used to compress the fracture site with the aid of image intensifier.



Figure 1: pre op x-rays

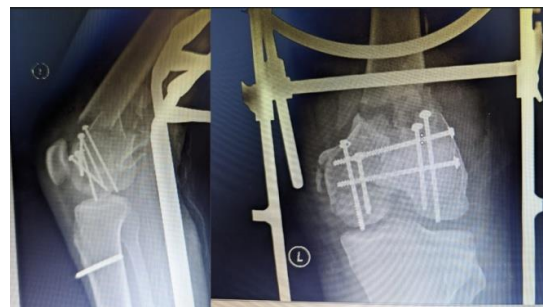


Figure 2: post op x-rays

### Conclusion:

Screw fixation using small diameter screws can be an effective treatment option for patients with this type of injury as compression of intercondylar fragments can be achieved prior to plating.

### REFERENCES:

1. Conolly, J.F., D. Dehne and B. Lafollette, 1973. Closed Reduction and Early Cast Brace Ambulation in the Treatment of Femoral Fractures: 55A: 1581-1599.
2. Loros, G.S., 1979. Supracondylar Fracture of Femur Editorial Comment and Comparative Results 138: 9-12.