

## A Rare Depression: A Case Report of Posterolateral Tibia Plateau Fracture

<sup>1</sup>Murthy Selvakumar, <sup>1</sup>Pee Terh Choo, <sup>1</sup>Jian Wei Low, <sup>1</sup>Solomon Jedidiah, <sup>1</sup>Draman Mohd Rusdi

<sup>1</sup>Department of Orthopaedics, University Malaya, Malaysia

### INTRODUCTION:

A posterolateral tibia plateau depression fracture has been underappreciated in most of the journals and has been a real challenge in terms of managing the fracture. Many classification systems such as Schatzker, Moore or Khan et al have described many variants, however, posterolateral depression is still unclear. Moto vehicle accidents have been a major cause for tibia plateau fractures and here we are writing about a rare fracture of posterolateral depression of a tibia plateau.

### REPORT:

A 39-year-old motorbike rider had involved in a moto vehicle accident when he was hit by a car on his ride side which subsequently patient tried to break fall using his right leg to stop, however, had twisted his right knee and sustained excruciating pain over the right knee and unable to weight bear thereafter.

Patient was brought to the emergency department with his vital signs stable however with a large swelling over the right knee. There was effusion present over the right knee with bony tenderness over the right proximal tibia region. The compartments were soft and noticed no open wound. Distal circulations were intact as well.

Plain radiograph of the knee showed proximal tibia plateau fracture with articular depression over the posterolateral plateau with intact lateral and medial cortices. We proceeded with CT scan which showed a fracture involving posterolateral split and depression and extension to medial plateau.



Figure A: Knee Plain Radiograph



Figure B : CT scan knee

A direct posterior approach was made in lazy S-shaped incision. Lateral head of gastrocnemius retracted medially and a window made to elevate the depression and buttress fixation. Patient then was repositioned and anterolateral approach was made for plate fixation for further stabilization of the proximal tibia.

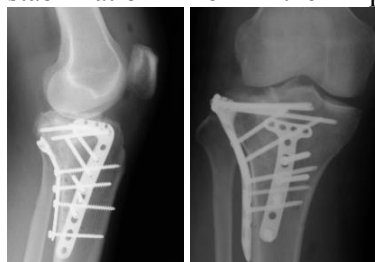


Figure C: Post operative plain radiograph

### CONCLUSION:

The location, direction and magnitude of a force determines the type of fracture pattern and its displacement. A valgus directed impact together with axial loading produce a posterolateral depression with split which is a rare entity on its own. A plain radiograph may be confusing hence a CT is warranted in order to address the fracture intraoperatively later.

### REFERENCES:

1. Chang SM et al., Treatment of isolated posterior coronal fracture of the lateral tibial plateau through posterolateral approach for direct exposure and buttress plate fixation. Arch Orthop Trauma Surg. 2009.
2. Khan RM et al., Tibial plateau fractures. A new classification scheme. Clin Orthop 375:231–242