

## Rare Knee Trauma: Fibular Head Avulsion Fracture With Concomitant Anterior Cruciate Ligament Avulsion Fracture

<sup>1</sup>Liong W, <sup>1</sup>Sellvam SA, <sup>1</sup>Benny Ewe BY, <sup>1</sup>Jagdish K, <sup>1</sup>Chua HS

<sup>1</sup>Orthopaedic and Traumatology Department, Penang General Hospital, Jalan Residensi 10990 George Town, Pulau Pinang

### INTRODUCTION:

Knee joint is a large weight-bearing joint and one of the most commonly injured joints. Fibular head fracture is rare in knee injury. We present a case with fibular head lateral collateral ligament (LCL) avulsion fracture with anterior cruciate ligament (ACL) avulsion fracture.

### CASE REPORT:

21-year-old man had a motor-vehicle accident and presented with right knee pain. Examination revealed swollen right knee with tenderness most at proximal fibula. There was no foot drop nor ankle pain. Radiograph of right knee showed displaced fibular head LCL avulsion fracture and tibial spine ACL avulsion fracture. We performed open reduction and screw fixation for fibular head fracture and ACL avulsion 3 weeks post injury. Operation followed by knee brace and physiotherapy. Patient bear weight fully with no symptom of instability or pain 6 weeks post operation.

### DISCUSSIONS:

The incidence of fibular head fracture is only 0.6% as stated in a study of 2318 knee injuries<sup>1</sup>. None of these fracture was isolated injury<sup>2</sup>. LCL which attaches to the fibular head distracts the fracture fragment hence hinders healing. Besides LCL avulsion and possibility of Maisonneuve fracture, this injury may be associated with injury of other knee structures and neurovascular bundle attaches to it. Also, it should be recognized as an important indicator for posterolateral instability of knee whereby both cruciate ligaments injury maybe present<sup>1</sup>.



Figure 1: Fibular head fracture with tibial spine fracture



Figure 2: Screw fix fibular head and ACL avulsion

### CONCLUSION:

For the peculiarity of such injury, we suggest all fibular head fracture warrants orthopedic referral. Full length tibial and fibular radiograph should be assessed. Associated knee injury is presumed until proven otherwise.

### REFERENCES:

1. Huang GS, et al. Avulsion fracture of the head of the fibula: MR imaging findings predictive of injuries to the posterolateral ligaments and posterior cruciate ligament. *AJR Am J Roentgenol* 2003; 180(2): 381-387.
2. Bhanu Sharma, et al. Presentation and options in management of avulsion fracture fibular head: A prospective study of rare entity. *International Journal of Orthopaedics Sciences* 2017; 3(3): 677-682.