

## **Association Of Posterior Cruciate Ligament Injury In Different Types Of Femur Fracture In Hospital Alor Setar Kedah, A Cross Sectional Study**

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### **INTRODUCTION:**

Posterior Cruciate injury in association with ipsilateral femur fracture has been historically underdiagnosed as many cases are missed during the initial trauma. The incidence or proportion of this injury has wide variation and the incidence in our setting is not known. Understanding the proportion and association of posterior cruciate injury with femur fracture enables us to detect the injury early and treat the injury accordingly. The aim of treatment to provide a stable and pain free knee while minimalizing the risk of OA. This aim can be achieved if the injury is picked up early so that an early physiotherapy regime can be started.

### **OBJECTIVES:**

To detect the proportion of PCL injury in combination of femur fracture and to determine the relationship between the demographic factors, the cause of injury and different types of Fracture femur. Thus by understanding the association of the injury with different types of fracture femur, it will enable us to diagnose the injury more reliably so that it can be detected in acute setting or as early as possible so that early treatment either operative or non-operative by means of physiotherapy can be initiated.

### **PATIENTS AND METHODS:**

This was a single centre cross sectional study in which from Jan 2012 till June 2014, all patients that were diagnosed with femur fracture who meet the inclusion criteria were reviewed to determine the association of PCL injury. There were total 144 patients included in this study

### **RESULTS:**

There were total 144 patients included in this study. From this 144 patients, 13 patients had PCL injury (9%). Based on the study, 6 out of 13 cases of PCL injury with femur fracture were detected late with one case was detected 6 weeks after injury, three cases were detected 8 weeks after injury, one case was detected 9 weeks after injury and 1 case was detected 10 weeks after injury. The remaining 7 cases of PCL injury were detected early. Out of the 7, 5 were avulsion injury which was picked up by x-ray during the initial assessment and the other 2 were picked up following the fixation of femur.

### **CONCLUSIONS:**

The proportion of PCL injury with femur fracture is 9% in our setting and distal 3rd femur fracture have higher incidence. Majority of the cases that were missed was due to failure to perform complete knee examination following fixation. We strongly recommend all patients undergoing femur fracture fixation should undergo complete knee examination while still under anaesthesia. These patients, especially with distal 3<sup>rd</sup> femur fracture should also be repeatedly screened during their clinic follow up.