

# Surgical Fixation Aids In Early Ambulation For Patient With Unstable U-Shaped Sacral Fracture

Ridhayah AR; Amar I; Aida NS; Kandasamy M; Sockalingam N  
Orthopaedic Department, Hospital Seberang Jaya, Pulau Pinang

## INTRODUCTION:

U-shaped sacral fracture is a rare and often missed primarily. It is also known as 'Jumper' fracture because it usually occurs after a jump or a fall from height. Isolated U-shaped sacral fracture is rarer and it is commonly associated with other injuries. Biomechanically, it is caused by axial loading results in vertical, bilateral and transforaminal fracture. This leads to unstable spino-pelvic dissociation. Due to rarity of this fracture, there is lack of an agreed treatment strategy.

## REPORT:

A 22 year-old Malay man, alleged motor-vehicle accident and sustained Type III U-shaped sacral fracture with left acetabulum T-type fracture, left inferior pubic rami fracture, closed fracture left proximal tibia and L5 transverse process fracture. Post trauma patient complaint of lower back pain. Clinical examination noted pelvic spring positive but no neurological deficit. CECT Pelvic shows Type III U-shaped sacral fracture. Open reduction and posterior instrumentation over L4L5 and sacroiliac joint screw fixation was done. 4 months post operation and rehabilitation, patient able to return to pre-morbid ambulation.



Figure 1: Pre-operation CT scan



Figure 2: Post-operation x-ray

## CONCLUSION:

U-shape sacral fracture is easily missed in majority of polytrauma cases as it is rare and it is often associated with neurological deficit. Proper clinical evaluation and treatment needed to prevent progressive deformity and chronic pain. Surgical intervention has been reported to have better outcome. Irrespective of the type of fracture, U-shaped sacral fracture is a highly unstable fracture due to spino-pelvic dissociation. Hence spino-pelvic fixation offers better fracture stability. We conclude that early stable fixation for patient with U-shaped sacral fracture aids patient to regain pre-morbid ambulatory capacity.

## REFERENCES:

1. Eur Spine J. 2012 May; 21(5): 829–836
2. Gribnau AJ1, van Hensbroek PB, Haverlag R, Ponsen KJ, Been HD, Goslings JC. 2009 Oct;40(10):1040-8