



## The Importance of Vertical Radiograph in Thoracolumbar Fracture

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### INTRODUCTION:

The high rate of the thoracolumbar vertebral fracture is most commonly attributed to high energy trauma such as road traffic accidents and fall. The fracture can result in neurological deficits, chronic back pain, kyphotic deformity, limitations in daily activities and reduced quality in life. Thus, appropriate examination and imaging are important in order to stratify the patients.

### REPORT:

This report is about a 60 year-old man, with no known medical illness involved in a road traffic accident and sustained excruciating pain over the back. Upon the assessment in the Emergency department while adhering to the ATLS protocol, noted patient had significant tenderness over the thoracolumbar junction and no obvious step deformity was palpable. Fortunately, patient had no neurological deficits and he did not sustain any other injuries. The plain radiograph of the thoracolumbar noted T11 fracture with kyphotic deformity with angle of 13. After a detailed clinical examination and the imaging, patient was explained in line with conservative management and to immobilize with a Jewett brace. By day two of admission, the pain score reduced and thus a standing xray of the thoracolumbar was repeated. The repeated Xray showed T11 burst with kyphotic angle of 27 degree. Therefore it changed the mode of management of this patient. Further explanation given to the patient and was proceeded with further imaging. And subsequently patient was prepared for Posterior instrumentation via MIS.



Image 1: Supine Xray with kyphotic angle of 13 degree



Image 2: Standing Xray showing the kyphotic angle of 27 degree.



Image 3: CT thoracolumbar



Image 4& 5: After the posterior instrumentation

### CONCLUSION:

From this case, we have learnt that it is important to provide adequate images before deciding the mode of management. However, the role of stand-up xray is limited to patients with vertebral fractures with no neurological deficits and can be done once there is reduction in pain. Saying that, this modality is applicable in centers where by advanced imaging are not available for eg, CT scans and MRI scan.

### REFERENCES:

1. Spiegler UJ, Fischer K, Schmidt J, et al. The Conservative Treatment of Traumatic Thoracolumbar Vertebral Fractures