

# LATE OPERATIVE STABILIZATION OF THE LUMBAR FRACTURE-DISLOCATION (A case report)

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*A rarely seen, late and neglected fracture-dislocation of the lumbar vertebrae which was stabilized operatively is discussed and reported.*

## CASE

A 25 year old male patient was admitted to our hospital complaining of weakness and loss of strength in his lower extremities. He was caved in a coal mine accident while working.

He was brought to our hospital two months after the trauma. He became paraplegic right after the trauma. He had some neurological and functional recovery in the subsequent two months. On physical examination there was partial strength loss of hip and knee muscles and a flail foot. Anal sphincter and bladder functions were normal but impotence was noted. There was anaesthesia at L4,L5,S 1 dermatom. He was graded as class C according to Eismond (1) classification when first seen in our hospital. Routine laboratory findings were normal.

There was lateral fracture-dislocation of the L3 vertebra on the L4 vertebra. L3 and L4 vertebra were positioned side to side in the AP x-ray view. There was a little forward shift of L3 on lateral x-ray view. In addition, areas of heterotopic ossification were seen around the lesion.

## OPERATIVE TECHNIQUE

A double stage operation was performed for stabilization. Initially an anterior interbody fusion was performed through transperitoneal approach. It was extremely difficult to release the fibrous and fibroscus tissue around the vertebrae. A 10 cm long fibular graft 10 mm in diameter was inserted in a hole drilled across the bodies of L3 and L4 thus creating an interbody fusion.

Two weeks later, posterior fusion using Harrington instrumentation with sacral bar was performed. At 15 months follow-up, the patient can easily walk short distances with crutches using short leg walking orthosis.

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## DISCUSSION

A fracture due to rotation alone is quite rare (2). We were unable to find a proposed treatment for such belated cases in the literature. We planned a different treatment because it was not possible to perform a classical fracture-dislocation treatment in such a case. We preferred to use the Eismond classification instead of the classification of Frankel et al (3) which is useful for spinal cord injuries and inadequate for the grading of cauda equina lesions, which are frequently incomplete. Due to the expectancy of high recovery rate of cauda equina lesions, and the high potential of the patient to walk, we decided to stabilize the vertebral column. Reduction was not performed in thought that it may further endanger neurological status. Instead the vertebrae were fused anteriorly and posteriorly. Vena Cava Inferior and aorta which were almost adhered to the vertebrae limited the manipulations therefore it was very hard to dissect the fibrous tissue and the heterotopic ossification in between the L3 and the L4 vertebrae during the anterior fusion. With the thick fibular graft traversing the bodies of the vertebrae both fusion and partial internal fixation was accomplished. Thinking anterior fusion would not be sufficient alone, posterior stabilization with Harrington rod was performed.

In order to prevent severe pain and probable progression of neurological deficit that may result from instability in such belated cases our method seems to be an effective one to mobilize the patient, safely.

## REFERENCES

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