

FUNCTIONAL AND RADIOLOGICAL OUTCOME OF UNSTABLE BURST THORACOLUMBAR FRACTURES: CONSERVATIVE VERSUS OPERATIVE TREATMENT

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INTRODUCTION:

Definitive treatment of unstable thoracolumbar fractures has become controversial in spinal surgery practice. Patients with neurological deficit are candidate for operative treatment to improve quality of life. However, those with intact neurology status, the decision are still debatable

METHODS:

From January 2011 to December 2015, 529 patients with thoracic and lumbar fractures was admitted to our institution. Only 39 patients completed 6 months follow up with complete medical records and radiographs images. Twenty-two (22) single-level unstable thoracolumbar fractures treated conservatively with thoracolumbar orthosis or body cast with early ambulation for 12 weeks and 17 patients treated operatively with posterior instrumentation and decompression. Retrospectively, we have included the patient who were proposed for operative treatment for spinal instability and neurological deficit but opted for conservative treatment. The ASIA grading, Denis Pain Scale and Denis Work Scale were used to assess the functional outcome and kyphotic angle, anterior vertebral body height were used to assess the radiographic outcome after six months follow up. Statistical analysis done using SPSS ver. 23 and STATA ver.14

RESULTS:

19 out of 22 patients in conservative group and nine out of seventeen patients in operative group and had intact neurological status. One patient had deterioration of neurological status in conservative group but none in the operative group developed the same complication. In conservative group, one patient (4.5%) and four patients (23.5%) from operative group had improvement of ASIA grading. There were significant differences in kyphotic angle and anterior column height between both groups.

However, both groups showed no significant difference of pain status according to Denis Pain Scale with four (18.1%) patients from conservative group and three (17.6%) patients from operative group had no pain while the rest of the patients had mild pain with none of them experienced severe pain and disability. According to Denis Work Scale, 11 (50%) patients from conservative group and 4 (23.5%) patients from operative group returned to previous employment. Two patients from each group were unable to return to full time work. There was no significance difference in between two groups in term of Work Status.

DISCUSSIONS:

The indication for surgical spinal stabilization in unstable thoracolumbar fracture with intact neurology is highly debatable with many authors reported excellent functional outcome with conservative treatment while posterior instrumentation and decompression offered better functional and radiological outcome with early return to work, less pain, better sagittal balance and shorter hospitalization.(1,2,3,4,5)

Socioeconomic status and patients' understanding play major roles in influencing the preferable treatment opted for the patient .(6)

CONCLUSION:

Conservative treatment is an acceptable alternative method to treat unstable thoracolumbar fractures without neurological deficit for those who are not keen for surgical intervention. Operative stabilization in combination with decompression offer opportunity for neurological recovery.

REFERENCES:

1.Nitin Kansal AA, BV Patel. Results with Non-Operative Treatment in Dorsolumbar Fractures with No Neurological Deficit: A Functional Assessment. International Journal of Medical Science and Public Health. 2013;2(3).