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## Early Functional and Radiological Outcomes Between Plaster Cast and Fiberglass Cast in Stable Thoracolumbar Burst Fracture

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### Abstract

Introduction: Burst fracture results from compression failure of both the anterior and middle columns under substantial axial loads. Conservative treatment was a method of treatment for fractures without neurological deficit. This cross sectional study was designed to evaluate the functional and radiological outcome of patient with thoracolumbar burst fracture treated conservatively. Methods: 40 cases were recruited from January 2013 till December 2015. They were followed-up with minimum period of 1 year and evaluated for the functional (Oswestry Disability Index) and radiological outcomes (kyphotic angle deformity and anterior body compression). Results: 20 patients were treated with body cast made from plaster of Paris and remaining 20 patients with fiberglass cast. In plaster of Paris group, mean kyphotic angle deformity at last follow up was 16.60 +/- 2.95 with a mean improvement 4.45 degree and anterior body compression at last follow up was 30.35% +/- 10.2 with mean improvement of 9.30%. In fiberglass group, mean kyphotic angle deformity at last follow up was 15.55 +/- 3.38 with a mean improvement 7.25 degree and anterior body compression at last follow up was 25.90% +/- 7.81 with mean improvement of 3.45%. The functional outcome showed Oswestry Disability Index (ODI) score in plaster of Paris group was 23.70 (SD = 7.82) and in fiberglass group was 18.50 (SD = 5.94). Conclusions: Application of body cast using a fiberglass material give better radiological outcome hence less pain, more functional and higher patient's satisfaction as compared to plaster of Paris.

### Keywords

Author Keywords: Thoracolumbar burst fracture; conservative treatment; functional outcome; radiological outcome

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