

Comment on Butt et al.: Management of unstable thoracolumbar spinal injuries by posterior short segment spinal fixation

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Received: 20 July 2007 / Accepted: 23 July 2007 / Published online: 9 November 2007
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Dear Editor,

We have read the article [1] with great interest, and we want to applaud the authors' efforts to simplify a rather controversial topic. We differ from the authors regarding the management of unstable thoracolumbar spinal injuries and would like to add a few salient points.

Short segment fixation has been shown to have higher rates of pedicle screw failure, which is thought to result from cyclic loading combined with poor anterior column support [3]. In our opinion this may be the cause of the high rates of hardware failure in the authors' series. As also rightly mentioned by the authors in their Discussion, posterior instrumentation alone cannot reconstitute anterior column support and is therefore somewhat weaker in compression than anterior instrumentation [2].

Some surgeons suggest using fixation two levels above and below the injured segment in severely comminuted vertebrae, particularly if bone quality is poor or in areas of higher stress concentration such as the thoracolumbar junction, taking care of mobile lumbar segments [4]. This has been clearly mentioned by the authors too, but not taken care of.

Transpedicular bone grafting has been suggested as a means of improving the anterior column support, though the results are not encouraging [3].

In the case of vertebral body height loss >50% or extensive comminution, pedicle screws are placed two levels above and below the fractured vertebrae. If there is <50% height loss, an attempt at short segment stabilisation is undertaken, with the recommendation that short transpedicular screws should be inserted at the level of the fracture [5].

Finally, we would like to draw the authors' attention to the "load-sharing classification" of McCormack et al., where a score is assigned to the degree of vertebral body comminution, fracture fragment apposition and kyphosis. Patients with a score >6 would be better treated with addition of anterior column reconstruction [6].

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A reply to this comment can be found at <http://dx.doi.org/10.1007/s00264-007-0449-z>.

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