Reviewer's report

Title: Biomechanical Comparison of Lumbar Spine Instability between Laminectomy and Bilateral Laminotomy for Spinal Stenosis Syndrome- An Experimental Study in Porcine Model

Version: 3 Date: 18 January 2008

Reviewer: Jim Dickey

Reviewer's report:

thank you for your revised manuscript. You have acknowledged the points from the previous review, and have acknowledged these limitations in the manuscript, but have not included assessments of how these limitations influence their results. The manuscript would be strengthened by adding this assessment.

Major Compulsory Revisions

1) The implications of testing with an applied eccentric load include that the loads are different at each spinal level and that the load at an individual spinal level depend on the flexibility of the spine. For example, the applied moment will be proportional to the applied load and the moment arm -- this moment arm increases as the specimen flexibility increases. You are correct in stating that all of your assessments were at one spinal level, but you have not acknowledged that the applied moment will vary as you change the specimen stiffness with laminectomies or other surgical or reconstruction procedures. Please add this limitation to the discussion section of your manuscript.

2) Your reasons for justifying the porcine model should be bolstered with references from the literature showing similarity in the mechanics of quadruped and human (Smit, 2002) and it would likely to cite some references of previous research that have used porcine lumbar spines as a model for the human spine (Asazuma et al., 1990; Gillespie and Dickey, 2004; Gurwitz et al., 1993; Kaigle et al., 1998; Kostuik et al., 1994; Russell et al., 1992).

Literature Cited


**What next?:** Accept after minor essential revisions

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests