Reviewer's report

Title: Lumbosacral fixation using intrasacral buttress screws: A modification to the Jackson technique using intrasacral rods

Version: 3 Date: 8 June 2014

Reviewer: Wun-Jer Shen

Reviewer's report:

To: The Editor, Scoliosis.

Dear Sir:

The Jackson intrasacral rod technique was developed in the early 1990s, but has not enjoyed much popularity in real world practice, mainly because of technical issues. Mazda and Ihlarreborde's group even developed a special template to guide placement of the S1 transpedicular endplate screws.

In this article, Takemitsu and his group took the Jackson concept and made it much more user-friendly by replacing the lateral sacral mass rod segment with a polyaxial head screw.

Major Compulsory Revisions

1) Page 5/Method/line 5: Since this is a paper on technique, the authors should elaborate more on this critical point. Since the surgeon cannot see "the distal end of the joint", what was used as the aiming point? Was some form of template or fluoroscopy used?

2) Please add a paragraph in the Discussion section on your indications for this technique. When will you recommend this procedure in addition to the standard S1 pedicle screws?

Minor Essential Revisions

1) Title: Consider changing "intrasacral buttress screws" to "lateral sacral mass screws". Jackson's ideas included iliac buttressing of the lateral sacral mass, which is not the same as "intrasacral buttress screws".

2) Abstract/Background/line 3 and on page 4 and page 9 in the main body text: "difficulty in adjusting the rod to contour the lateral sacral mass". Do the authors mean "difficulty in contouring the rod to fit the lateral sacral mass"?

3) Abstract/Methods/line 4 and Abstract/Conclusions/line 1: There is iliac buttressing of the dorsal sacral cortex, but how is the ventral sacral cortex buttressed?

4) Abstract/Results/line 1: "deferent" should be "different".
5) Method/line 3: Suggest changing "The lateral side is exposed at approximately 1 cm outside of the first dorsal sacral foramen" to "The exposure is extended laterally to approximately 1 cm lateral to the first dorsal sacral foramen". Also please describe the neurovascular structures that exit the first dorsal sacral foramen and what was done to them. Preserved? Cauterized?

6) Page 5/Method/line 7: "cancerous" bone should be "cancellous".

7) Page 6/Instrumentation/line 1: State exact brand and model of the pedicle screws used.

Overall, I believe this article does add to the current knowledge base and thereby merits publication in Scoliosis.

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Needs some language corrections before being published

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' below