Reviewer's report

Title: Subcutaneous internal anterior pelvic ring fixation versus external pelvic ring fixation - a biomechanical study

Version: 1 Date: 19 August 2013

Reviewer: Fabian Stuby

Reviewer's report:

The authors aim was to compare biomechanical stability of a subcutaneous internal fixation with standard external fixation of the anterior pelvic ring.

Although the method has been introduced several years ago and is in use since this time by many surgeons the characteristics of stablity have not been compared.

Of course it has to be asked if this question is really important and interesting!

The authors use a very simplified model with Screws drilled into Polyoxymethylene cylinders and tested simulated forces of translational and rotational stiffness.

Due to the larger diameter (8mm versus 5mm), the lesser distance of the coupling from the bone and the superior coupling characteristics of the Multiaxial screw coupling it is easy to forecast the result with superior hold of the rod-screw interface in the SIAF System.

The study itself is carried out cleanly and shows significant results which underline the already assumed advantages of this fixation method.

minor essential revisions:

why did you not use screws with a bigger diameter for the conventional external fixation? Screws with 6mm are easily accessible for example by Synthes.

Please describe the Medtronic screws and the coupling system more thoroughly, this will make it easier for the reader to understand the results!

line 23 patients'

line 54 patient’s: please adapt

line 179 adductor and adductor muscles? may be one of it is abductor?

The possible complications of the SIAF described in line 201 to 204 should also be mentioned in your introduction line 67 and following

Level of interest: An article of limited interest

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'