Reviewer's report

Title: 2D-Fluoroscopic Navigated Percutaneous Screw Fixation of Pelvic Ring Injuries - A Case Series -

Version: 1 Date: 19 April 2010

Reviewer: Pieter Koen Bos

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Dear editor,

The authors of: “2D-Fluoroscopic Navigated Percutaneous Screw Fixation of Pelvic Ring Injuries - A Case Series-“ have described their technique of navigation for a series of pelvic ring injuries. This report describes a straightforward technique with intra-operative fluoroscopic control, to discover problems like guide-wire bending, to prevent neuroforaminal penetration or misplacement of screws. Research with multiple injured patients is difficult due to the extent of injuries and difficulties to classify and compare these patients with life-threatening disease. The authors have described their method and given a global quality assessment of results. I think this manuscript gives a good overview of results that can be reached using this technique. I have the following comments.

Background:

Reference 1 is cited, however this study compares early ORIF to late ORIF and not ORIF versus conservative treatment. This should be stated more clear or another reference should be used. Moreover, the option of conservative treatment of undisplaced, stable fractures is ignored in this section while 226 of 326 fractures were treated in this way.

Methods:

Letournel and Matta advise to work from the back to the front, i.e. first to fix the SI-joint or sacral fracture and than fix the symphyseal pubis. Why did the authors chose for the reverse way. May this have influenced their results?

P5, line 136: Which type of fractures lead to the need of 3D evaluation? Is there a lesson for the reader?

P5, line 141: was the reduction maneuver finished before the MIA was placed on the contralateral pelvic bone? If not this may influence screw placement?

P6, line 160: no information regarding fracture reduction is given, this also influences functional outcome. Results of this evaluation is given in the results section, so should be mentioned in the methods. How was the reduction measured, which bony landmarks were used, which X-rays or CT reconstructions were used?
Results:
P7, line 203: I do not see the meaning of this remark. I think it should be in the discussion and should be explained. The radiation exposure is thought to cause the side effects for the patient and operating staff.
P7, line 207: What was the exact situation? Was there a neurologic complaint or fear for unsolid fixation?
P8, line 222: died of unrelated cause?
P8, line 230: All patients’ data were collected prospectively, was that the also the case for the 226 conservatively treated patients? This may give the opportunity to compare outcomes between conservative and operative treatment.

1. Is the question posed by the authors well defined?
Yes

2. Are the methods appropriate and well described?
See above comments. A functional outcome other than the SF36 is missing. Matta for example uses the simplified Merle d’ Aubigne score.

3. Are the data sound?
Yes

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
Yes

5. Are the discussion and conclusions well balanced and adequately supported by the data?
The outcome of nonoperative treatment is not discussed, but is important for the evaluation of operative treatment.

6. Are limitations of the work clearly stated?
This is a prospective cohort series. There was no control group.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?

8. Do the title and abstract accurately convey what has been found?

9. Is the writing acceptable?
Yes

**Level of interest:** An article of importance in its field

**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