Reviewer’s report

Title: Development and external validation of a new PTA assessment scale

Version: 1 Date: 22 May 2012

Reviewer: Andrea Lazosky

Reviewer’s report:

Major Compulsory Revisions - None required.

Minor Essential Revisions

Overall, this is a very interesting study and presents an alternate PTA scale that is shorter than others and offers some benefits of the registration and memory for 3 words and eliminates some of the limitations of other scales used.

1. Background paragraph 2, the 4th sentence, beginning "In addition, test items that require....." is difficult to understand. It took me a while to sort out what you were saying. Instead of inserting a phrase in the middle of the sentence separated by dashes, I would break this up into two sentences to make it easier to read and I would add to the end of the sentence ".....by different people" just to make it clearer.

2. Background paragraph 3, the first sentence should say scales, not scale.

3. Subjects paragraph 1, 3rd sentence needs some wording changes. Suggest, "Two control groups for both the derivation and the validation study were recruited, one group of healthy controls and a second control group of patients with isolated traumatic orthopedic injuries who were admitted to the ED and the surgical ward."

Please clarify why the 2 control groups’ data were not presented separately. I saw only one control group in the tables. Which control group was it? What happened to the data from the other control group? Were the two control groups collapsed into one control group?

4. PTA Assessment - what criteria were used for determining when the patient was out of PTA? Does a patient require a perfect score on the new PTA test to be considered out of PTA?

Are the patients told the correct answers each time after the testing?

Please clarify administration for the three word memory test. It was a bit confusing at what intervals the tests were administered. Different timelines were presented, 5 minutes, 1 hour, 24 hours, 48 hours.

Please clarify, when using your PTA test, when is the first time the patient is tested for recall of the 3 words to pass the test? Immediately following
presentation or five minutes later? At one point in your study a recognition trial was given. How is this data used?

5. Results - Please specify the criteria you used to define low, medium, or high sensitivity and specificity.

6. Discussion - Last sentence of 3rd paragraph starts with "Whereas..." and is a phrase. Suggest linking it with the previous sentence using a coma.

The only additional comment is that I would like the authors to state what the exact administration and scoring procedures are that they used for their PTA scale, including criteria for being declared no longer in PTA. (see comments above regarding timelines, first time 3 word memory component administered, whether patients are provided with the correct information at the end of each administration, frequency of administrations, etc).

**Level of interest:** An article of importance 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.