Reviewer’s report

Title: Assessment of visual fixation in post-comatose states: use a mirror

Version: 2
Date: 11 April 2014

Reviewer: Marion Luyat

Reviewer’s report:

It is a very interesting experiment conducted on a very large sample of patients with very important applications in clinical care.

Minor essential revisions

Check this reference in the "reference list" because it seems that "223" is missing at the end.

- it is not clear for me where the patients had been recruited (on several hospitals?)

- Abstract, section results: in my opinion, the p-value can be removed in the abstract but it is unclear what kind of comparisons (2 by 2) are in fact significant

- Page 1. Uppercase for "W" of Wessex Head Injury Matrix

- Method section: The method of presentation of the stimuli was not sufficiently presented. Was the ball projected on the screen of a laptop? Was the mirror held by an experimenter? The same for the recordings of the eye movement and visual fixation. Did the experimenter who recorded the eye movements knew explicitly the hypothesis?

- 3 page 3: results section. I don’t understand very well to what kind of comparison the p-values were linked. They were local comparisons between frequencies or relatively to the chance-level? What was the global value of the observed Chi-2 statistic?

- It will be interessant to have some correlational results or results from multiple regression for instance. Did the sex of the patient had an effect?

Figure 1: unresponsive rather unrspnsive (the "o" is missing")

discussion section:
In my opinion, the p-value in the discussion section can be removed

The reason for why eye-recorder was not used must be explained (perhaps it could be a brake to have a large sample of patients because less convenient to
manage?) or if it is possible, the authors should explain that the results would be confirmed by this kind of methodology in the future

English is not my maternal language, I would prefer to not judge the quality of English. I note "acceptable" because I have no alternative choice in the review process

**Level of interest:** An article of outstanding merit and interest 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' below