Reviewer’s report

Title: Use of Cerebral State Index to Predict Long-Term Unconsciousness in Patients after Elective Craniotomy with Delay Recovery

Version: 2 Date: 20 September 2010

Reviewer: Qulian Guo

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Dear editor:
I’m sorry to reply so later. For some personal reasons, I hadn’t used my email system for about fortnight.

Comments for manuscript:
This is one of studies of CSI in postoperative care and should be of interest to the majority of anaesthetists and neurosurgeons. In this clinic study, the authors evaluated the performance of CSI monitoring in predicting long-term unconsciousness in patients after elective craniotomy. The results showed that CSI monitoring in the first 6 postoperative hours had excellent prediction ability (prediction probability nearly reach to 1) for long-term postoperative unconsciousness. I think it is helpful to neurosurgical postoperative care.

Background
There was no testable hypothesis (only an aim) presented in the background. I suggest that the authors state why conceive using CSI monitoring to predict long-term unconsciousness in patients after elective craniotomy with delayed recovery from general anesthesia and present a clear hypothesis in the background.

Methods and Results
In methods, the authors state that patients’ anesthesia was maintained by sevoflurane in oxygen (page 4, line 12), but during skin closure, sevoflurane was changed into isoflurane and discontinued (page 4, line 16).

I have another problem on the criteria of delayed recovery, in page 4, last paragraph, the conditions can lead to delayed recovery have “impaired preoperative state of consciousness”. but in results (page 8, first paragraph), 5 patients were excluded due to decreased level of consciousness preoperatively. why? Is these inconsistent context a slip of the pen?

Discussion
Page 10, part of the first paragraph (such as line 7-11) are results and not discussion.

Level of interest: An article whose findings are important to those with closely
related research interests

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

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.