Reviewer's report

Title: Head CT is of limited diagnostic value in critically ill patients who remain unresponsive after discontinuation of sedation

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Reviewer: Arzu Topeli

Reviewer's report:

The manuscript is about the limited diagnostic value of head CT in ventilated unresponsive patients after discontinuation of sedation which was performed with continuous infusion of sedatives.

It is well written and the major finding is important although the study is retrospective in design and the patient number is relatively small.

Minor Essential Revisions:

The mean time from discontinuation of sedation to regaining consciousness was about 4 days and on average 2 days after discontinuation of sedatives a CT scan was performed. And the duration of sedation was quite long (about 12 days). Although authors stated that more than 1/3rd of the patients had impaired renal function, it would be nice if they could add some additional information about the relation between time to regain consciousness after discontinuation of sedatives and renal/liver function tests of the patients, the total duration of sedation and perhaps the cumulative dose. If the relation is good, then could the authors suggest to postpone the CT scan especially in patients with impaired renal and liver functions who received prolonged sedation in high doses, with no focal neurologic abnormality, no abnormality on EEG and CSF, no bleeding diathesis, etc.

It could be informative if authors describe whom they performed MRI, the findings, the time interval between discontinuation of sedation to MRI and from CT scan to MRI.

Only one fifth of the patients received daily interruption of sedation, was it not performed in the others, at all? Why?

Please check the numbers in tables and correct them: Table 2, omit type of sedation and daily interruption parts (the numbers do not match with the text and table 4).

Table 3, no need to put acute infarct part. Table 4, omit type of sedation, (all patients received continuos infusion). Patient number who did not receive daily interruption in table 4 is wrong.

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.