Reviewer's report

Title: Translation and validation of the Korean confusion assessment method for the intensive care unit

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Reviewer: Maarten Menno Jeroen van Eijk

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- Major Compulsory Revisions

1) It is not rational to exclude feature 1 from the CAM-ICU.
Without feature 1, how can one distinguish between delirium and preexistent dementia?

2) How many patients received psychoactive medication in between the two assessments?
This is vital to know, because a majority of patients received for example haloperidol in between assessments, no good comparison can be accomplished.

3) Methods; line 25 …. We took time to discuss the results with the raters ……..
This is a source for bias. If the nurses changed the outcome of the CAM-ICU assessment after a discussion with the authors (who are delirium experts?), what is then the value of the CAM-ICU? The authors should state in how many occasions the nurses changed their opinion, or even better, use the CAM-ICU result before the discussions.

4) Results and discussion; line 6…. 41% of enrolled…..
What is your explanation for the lower incidence of delirium when compared to the frequencies found by Ely et al, to which you referred?

5) Results and Discussion; line 12……During the second period ………
I do not understand what the authors mean with these paragraph. Did they look at the entire CAM-ICU (so yes or no delirium) or did they look at the individual features? A disagreement rate of 23% is still very high. Kappa's of 0.60 and 0.64 are low, indicating a moderate agreement at best. Again, it is logical that, if both nurses were helped by the same person to correct their CAM-ICU scores, the interrater reliability will go up.

6) Results and Discussion; line 23…… We analyzed the sensitivity and specificity again after excluding ……………
Again, when you excluded feature 1, this study stopped to be a validation study and became a diagnostic test study, with a new type delirium score.

7) Discussion; line 6 …..acute onset or fluctuating course …….
But this is essential for the diagnosis delirium. The disorders develops rapidly over time. Without this feature, how can you identify delirium?

8) Discussion; line 11 …..in practice, interviews with ………
Why are these interviews not easy, and why was the study nurse not able to perform these interviews?

9) Conclusions; line 5 … .through reducing the incidence ……
How can a screening method (or diagnostic test if you will) reduce the incidence of delirium?

- Minor Essential Revisions
1) Background; line 6, ..... delirium occurred in between 81.7% and 87%....... This of course is correct, but there are other studies showing a much lower incidence, for example Bergeron et al. Intensive Care Med (2001); 27; 859-864. The authors should discuss this and give an explanation for the large difference in incidence.

2) Methods; line 24, ....... CAM-ICU in which a few words ……… What words, why were they changed and into what were they changed

3) Results and discussion; line 26 .... The overall accuracy ..... How was the overall accuracy calculated?

4) Results and discussion; line 26 .... Sensitivities for the Korean…….. Is this with or without feature one?

- Discretionary Revisions
1) Background; line 17.....for practical use……… What do the authors mean? For clinical use?

2) Methods; line 6....psychosis or neurologic disease Please explain what kind of neurological diseases this were

3) Methods; line 15 .... One research nurse and another experienced nurse ...... How many years of experience did these nurses have? Did they receive any special training for this study? Had the research nurse worked with delirious patients before?

4) Methods; line 17 .... An experienced psychiatrist………. How many years of experience did this psychiatrist have? Was he used to work in the ICU?

5) Methods; line 19 .... Were done between three and seven ......... What was the median (or mean) time between assessments?
6) Results and discussion; line 1 ..
Please state when the study was performed.

7) Results and Discussion; line 18 ..Patients who were admitted.......... Why was admittance shorter than 24 hours an exclusion criterion?

8) Discussion; line 7 ......except the nurse who .......
I don not understand this sentence. A nurse who does not care for the patient can assess baseline mental status?

**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:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**
I declare that I have no competing interests