Reviewer’s report

Title: Postoperative delirium assessed by post anesthesia care unit staff utilizing the Nursing Delirium Screening Scale: a prospective observational study of 1000 patients in a single Swiss institution

Version: 0 Date: 30 Sep 2015

Reviewer: Heidi Engel

Reviewer's report:

The title of this article suggests this is a report of incidence of delirium in a PACU, however the conclusion and methodology do not explain the findings in a logical way, and there are many missing details. Addressing the article from start to finish, here are the questions and concerns supporting my recommendation:

Background: The writing is vague and reported facts are not well supported. Rather than cover this section with older references from smaller journals, there are a few notable comprehensive journal articles on delirium you may consult for specific information:


These articles give specific tests and measures to describe the long term functional decline, the independent association of mortality, the cognitive and psychological sequelae resulting from delirium. These are missing from the current draft of this submission.

Regarding the choice of delirium detection tool, the rationale appears to be that it is a simple to utilize tool. However there is no mention of the development of this tool for use in the PACU, or how it compared to the CAM as cited in the reference, nothing about how valid or reliable it is or the level of specificity and sensitivity compared to other measurement tools or as a function of the RN training provided for use in the submission. Of note, a recent study assessing delirium prevalence in a PACU setting chose the CAM rather than the NU-DESC:


The rationale for choosing the NU-DESC is important to state also in light of a previous journal article comparing several delirium screening tools in ICU populations:


Methods:

The timing of the delirium screening is vague and random- when the patients were ready for transfer out,, a time interval from admission to the PACU in minutes would be more objective and reproducible. A description of enrollment procedures, consenting, and exclusion criteria would be helpful to understanding the findings. How many RNs were trained to perform the NU DESC and how did you establish their proficiency? Rather than describing the demographics of the hospital and the PACU, it would be more informative to know more about the sedating agents, pain medications, and some measure of comorbidity or illness severity.
Discussion:

The statement in line 190: generally it has been shown that nurses collecting data in the course of routine care have significant problems using even validated screening tools such as the CAM ICU is not well supported by the given reference. Was the intention to say the CAM-ICU itself is challenging or just adding any additional screening tool to an RN day and achieving adoption is difficult? It appears the objective of the paragraph in lines 187 through 202 is to support the choice of delirium assessment tool- the NU-DESC over the CAM-ICU. However the logic of this is not clear and the rationale for which tool was chosen for the study is appropriate for the Background or methods section.

It is difficult to determine what the objective of this prospective observational study was- to assess the reliability of the NU-DESC or to understand something about the incidence of delirium.

Conclusions:

The 4% rate of PACU delirium found in this study at the time of patient discharge from the PACU is declared low, yet is within keeping with the findings of a PACU delirium survey utilizing the CAM-ICU conducted by Card et al. entitled Emergence from General Anesthesia and Evolution of Delirium Signs in the Post-Anesthesia Care Unit, The Card study has the additional feature of a multivariable logistic regression assessing for potential risk factors for PACU delirium. Making PACU delirium screening relevant to clinicians in the future will involve examining if PACU delirium has an actual association with adverse outcomes, the question is, does PACU delirium represent a predictive indicator of the patients ability to recover fully? Without addressing this concept in the study design or in a thorough literature review, the paper lacks a valuable take away for the clinician and it only represents a feasibility study of RN capability to perform the NU-DESC.
Are the methods appropriate and well described
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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