Reviewer’s report

Title: Indwelling pleural catheters for malignancy-associated pleural effusion: report on a single centre’s ten years of experience

Version: 0 Date: 20 May 2019

Reviewer: Robert John Hallifax

Reviewer's report:

This is a single centre retrospective review of IPC usage. As such, it is not practise changing, but the large number cases make it an interesting study.

Overall it is well presented with good discussion of key points.

Major comments:

- Although paramalignant pleural effusions are described in the ATS guidelines, PPE is NOT a commonly used acronym so would avoid using it: instead just say "paramalignant effusion".

Paramalignant effusions are uncommon and are a specific clinical entity. It is well known that pleural fluid cytology sensitivity is poor (50-60%), and CT radiology also has a poor negative predictive value (Hallifax et al, Thorax. 2015 Feb;70(2):192-3). Therefore, there is a danger a significant number of patients will have 2x negative cytology and "bland" radiology will actually have pleural malignancy. Furthermore, a "cytology negative" free flowing effusion would behave very differently to an effusion resulting from central obstruction.

I therefore suggest that the authors restrict their definition of paramalignant effusion to those with central obstruction or lymphatic involvement. An additional category of "cytology negative" effusions in the context of known malignancy would be reasonable. Likewise, cachexia and hypoalbuminaemia should not be lumped together with obstructive effusions.

- Table 3 is confusing. There needs to be headings about columns 1-2 and 3-4 specifically stating that they refer to AP and survival, respectively (not just stated in the legend. I have concerns about the use of regression. Please list all of factors assessed in the cox analysis. The authors have already stated that those surviving longer were more likely to achieve AP. Will this not confound the analysis? Was talc included in the analysis.

"Quality of effusion" should be renamed "Cause of effusion". What is the difference between MPE vs PPE/Unknown and MPE vs PPE/Unknown*?

Minor comments:
- Table 2. I think it would be useful to present the % of complications out of the total number (rather than just the total complications). This would allow readers to better assess the overall rate of empyema (2.3%) which is not explicitly listed in the table.

- the word "albeit" is used incorrectly in the manuscript and should be replaced with "Although".

- "vice versa" should be replaced with "conversely".

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

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

Unable to assess

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

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
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I am able to assess the statistics

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