Reviewer’s report

Title: Increased the risk of pulmonary hypertension following premature birth

Version: 0 Date: 01 Nov 2018

Reviewer: Michael Nyp

Reviewer's report:

Thank for the opportunity to review the manuscript entitled "Increased the risk of pulmonary hypertension following premature birth" currently under consideration for publication in BMC Pediatrics. In this manuscript the authors report on a population-based registry study for risks of PAH. The authors' findings are interesting showing premature infants had a higher risk of PAH at greater than 5 years of age and is more frequent over the last few years. Although the authors' observations are interesting there remains some unresolved issues with the manuscript which are outlined below.

1) The overall structure of the study is difficult to follow and may not be the best approach for the aim of the study. The presumption in the aim states PAH risk following premature birth but not all the controls were premature. The design of the study for the stated aim do not line with study design. I would suggest changing the aims or modifying the methods to align with aim better.

2) Abstract is overall written well but again study design makes the study difficult to follow. Controls matching to birth year and delivery may not be the best control model. The lack of details about factors included in the logistic regressions make the result difficult to interpret. Since the aim of the study is stated as assessing risks of PAH following premature birth then PAH associated with premature birth cannot be a result.

3) The background section lack sufficient details to get to why this study was done.

4) The methods lack important details including why the study population was study, certainly treatment and care of neonates has changes a lot since the 1970's make the overall study population difficult to assess significance of their finding and focusing more on the more recent data or even comparing early epoch to later epoch to assess for risk of PAH related to premature birth maybe a different study design. There is a lack of details in the logical regression design and what known confounding factors were controlled for.

5) Results are hard to follow with poor quality tables and figures. Data is really hard to interpret. Recommend more details in methods section and clarifying the tables and figures. Improving methods and study design with make results easier to interpret.
6) Due to the difficulty listed in the methods and results section, the discussion section is difficult to follow. Some areas of the discussion lack important details (known risk factors, prematurity survival in the 70's, discrepancies between prematurity survival in the 70's and neonatal deaths of only 8% in 1973)

7) The conclusion is not clear on which new factors have the authors identified that may play a role in risk of PAH developing in preterm infants.

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.

Yes

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

Unable to assess

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.

I recommend additional statistical review

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

Acceptable

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