Reviewer's report

Title: Effects of different flow patterns and end-inspiratory pause on oxygenation and ventilation in newborn piglets: an experimental study.

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Reviewer: SOSHI HASHIMOTO

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Review:
Effects of different flow patterns and end-inspiratory pause on oxygenation and ventilation in newborn piglets: an experimental study.

As of now, there are few experimental data to suggest any standardized approaches for initiating mechanical respiratory support in neonates and pediatrics. Authors demonstrate that application of decelerating flow pattern or end-inspiratory pause (EIP) have no effect on oxygenation and ventilation in healthy homogeneous lungs. This article is well written and raise a penetrating question about traditional ventilator mode that has been used in small infants. However, some issues could be pointed out in their manuscript.

Major Compulsory Revisions:
1. Authors conclude that there are no differences in PIP, Pawm, and Crs between decelerating flow (DF) and square flow (SF). On the other hand, most of previous studies showed a decreased PIP and a slight increased Pawm in adult and infant patients ventilated in DF rather than SF. Authors should make discussions about the cause of discrepancies between the results of this study and previous studies, with reference to the below articles.

2. Authors should add the airway pressure-time curve in each group in Figure 1. This information is essential to interpret the results observed in this study.

3. It would be useful if authors described data of peak inspiratory flow in each group in the Result section.

Minor Essential Revisions:
1. Abbreviation should be used properly. Authors used "MAP" as an abbreviation of mean arterial pressure. But, "PAPm" was also used on page 12, line 246 and Table 4. I think that "PAPm" is not appropriate.
2. On page 13, line 270, the word "injury" should be deleted.

3. The text is well organized but there are a few repetitions and thus the paper should be shortened to become more concise. For example, in the Discussion section, the sentences on page 17, lines 360-370 should be deleted.

4. Figure 2 and Figure 3 are redundant and should be deleted, as these results are included in Table 2.

**Level of interest:** An article whose findings are important to those with closely related research interests

**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.