Reviewer's report

Title: Changes in tracheal tube cuff pressure during laparoscopic surgery in head-up or head-down position

Version: 2 Date: 3 June 2014

Reviewer: Dawn Dillman

Reviewer's report:

Discretionary Revision
1. The question is not clearly defined. In the abstract, lines 33-35, the question is stated, "We assessed the cuff pressure changes after abdominal insufflation in both the head-up and head-down positions." This is not what they reported in the methods. In the methods it describes them doing insufflation in the supine position and then moving into the heads-up or heads-down position.

2. There are many other related articles, including a description of positioning changes by Lizy, C http://www.medscape.com/viewarticle/818880, that provide important background.

Major compulsory revision
3. I do think the conclusion is fundamentally flawed by not having an additional group that had neither the insufflation or change in position. Cuff pressure may tend to increase over time as the temperature of the gas in the cuff increases, so what is attributed to a change due to insufflation or positioning, may be just a change because of time. This is particularly true since there is no mention of whether nitrous oxide was used. Without including another comparison group, this should at a minimum be discussed as a limitation of the work in the discussion.

Minor essential revisions
4. The data analysis gives me a little pause. In Figure 1 cuff pressure and airway pressure for the insufflation state and the position state are labeled as significant but it is not clear whether the comparison for the position state is the insufflation state or the baseline state. In the text, it states that the cuff pressure and airway pressure position state is compared to the insufflation state and that the p value is <0.001, which may be true, but the 95% confidence intervals overlap quite a bit, so I find it hard to believe it is that significant, and would believe that this is really a comparison to the baseline state. At a minimum, this needs to be clearer in the figure and the text.

5. Turkey in line 96 should be Tukey.

6. Body weight in Table 1 should be units of kg, not cm.

7. English grammar is not quite correct in many places:
Line 31 should drop both the, Line 59 should drop the first the, line 60 should drop the, line 61 should have the before impact, line 85 breath should be breathing, line 125 should be that had, line 143 should drop the first the, line 151 should drop the the, the sentence beginning line 181 is very difficult to understand, line 185, influent should be influential.

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests.