Peer Review File

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Reviewer A

This technical note addresses a rare problem but one which may have serious consequences if the attending medical team do not know how to manage it. It is therefore of interest to the readership to read about this simple and practical technique which is quite possibly not known to many anaesthetists. The writing style and language used are clear and understandable. I have one significant reservation which is that the authors do not clarify in the text that the use of a cannula in this situation has been described before. As the article stands the reader could be forgiven for thinking that the authors have come up with a novel technique when in fact the over-riding principle has been published several times before including in a couple of the references and other publications (the first mention of a similar cannula technique that I could find in the literature was by Watson et al in Chest on 1989). Personally, I would be more comfortable if the authors clarified that the use of a cannula has been described before (with the relevant references clearly cited in the text) before describing the specifics of the technique that they favour. I have indicated that I would recommend acceptance after 'major' revision because I feel relatively strongly about this point, although it will take very little time to change this.

Reply: This has been clarified in the text by adding an additional paragraph in the discussion.

Changes in the text: Other techniques for the repair of damaged pilot tubing have been described [2-5]. These techniques have used similar instrumentation, including IV catheters, syringes, three-way stop-cocks, pressure gauges, and normal saline. The authors of this technical note wish to emphasize that while various other options exist, the importance of using what is readily available in the operating room at the time of the incident is most important to minimize further complications.

Reviewer B

Lam et al. report a technical note regarding pilot tubing repair. Since maintaining the cuff pressure of the intubated tube is a very important point for oxygen supply, the author's note will be very useful to the readers. I am grateful to the authors for sharing this useful method, as I recently experienced a decrease in tidal volume and repeated reinflation due to a malfunction of the spring valve of the pilot balloon. However, I suggest modifying or supplementing some of the contents in the article for readers.

Introduction

1. Line 58-59: "The design of the ETT is specifically designed to facilitate these functions." This sentence is a bit awkward. Correction please.

Reply: The authors have rewritten this sentence.
Changes in the text: “The ETT is specifically designed to facilitate these functions.”

2. Line 67-70: The authors wrote the possible consequences of damage to the pilot balloon, cuff line, or cuff. I recommend that the authors further describe that significant adverse events such as hypoxemia, hypercarbia, and surgical cessation may result.

Reply: These adverse events have been added to the manuscript with the sentence below:
Changes in the text: “The patient may also experience hypoxemia and/or hypercarbia, ultimately leading to the cessation of the surgical procedure.”

Technique
1. Line 90-91: In order to expedite the technique described by the authors, more specific guidance on what size IV catheter to select seems necessary. Please describe what size IV catheter you recommend trying first for specific sized tube. Please refer to the paper below and guide us in light of the author's experience.

Reply: We have described that the use of an 18G or 20G IV catheter is appropriate. If both options are available, use of the larger catheter first is appropriate as this may create a better seal between the catheter and the tubing.
Changes in the text: Added sentence “If both sizes are available, the practitioner may start with the 18-gauge catheter first as the larger size may create a better seal between the catheter and the tube. The size of the catheter should be changed to match the size of the pilot tube if the first catheter does not fit and/or if an adequate seal is not obtained.”

Structural Integrity of a Simple Method to Repair Disrupted Tracheal Tube Pilot Balloon Assemblies (PMID: 27607477)

2. When trying the repair method, it seems that the pilot tubing is likely to be torn by the needle. Have the authors ever had trouble with the pilot tubing being torn when attempting this repair? How many hours can you safely sustain cuff inflation if you try this repair?

Reply: The authors have not had an issue with the pilot tubing being torn when attempting this repair. Dayan and Epstein (2016) compared intact versus repaired pilot balloons with the technique described and found there was no pressure drop or air leakage after an 8-hour interval. This information has been added to the manuscript.
Changes in the text: Added reference [6]. Added sentences “If both sizes are available, the practitioner may start with the 18-gauge catheter first as the larger size may create a better seal between the catheter and the tube. The size of the catheter should be changed to match the size of the pilot tube if the first catheter does not fit and/or if an adequate seal is not obtained. The catheter should fit snug and not be easily removed by light pulling.” “Dayan and Epstein (2016) compared intact versus repaired pilot balloons with the technique described and found there was no pressure drop or air leakage after an 8-hour interval [6]. While the repair has been found to maintain pressure

and prevent air leakage according to this one study, the monitoring practitioner should maintain a high degree of suspicion for pressure drops or air leakage if the tube is not exchanged."

3. If you inflate the cuff blindly, the cuff pressure may be out of the safe range. After connecting the 3-way, how about measuring the cuff pressure by connecting a syringe to one side and a pressure transducer to the other side?

Reply: The authors did not do this for this specific case, but the suggestion will be added to the manuscript.
Changes in the text: Added "If available, adding a pressure transducer to a three-way stop-cock would provide this information and prevent over-inflation"

References
1. Please indicate the cited references in the text in order by number.

Reply: The cited references are now in the text in order by number.
Changes in the text: The cited references are now in the text in order by number.