CORRESPONDENCE

Cuffed Endotracheal Tubes Are Okay for Neonates

To the Editor:
I have read the article by Sathyamoorthy et al.¹ and was surprised to hear that they have noticed a higher than expected incidence of stridor after using the Microcuff (Kimberly-Clark, Roswell, GA) endotracheal tube (ETT) in neonates. They reported that on three neonates who after being intubated with these cuffed ETTs, each had significant postoperative stridor. Most interesting to me was that in each of the cases, no attempt was made to establish whether there was a functional leak at ventilation pressures above 20 cm H₂O after intubation. In two of these cases, air was injected into the ETT cuff, and still no measurement was made as to how much ventilation pressure the tube sealed at. After intubation in all pediatric cases, it has always been the standard of care to make sure that the ETT leaks above 20 cm H₂O to ensure that the tube is the correct fit. This is regardless of whether you are using a cuffed or uncuffed ETT. The only difference being that when using a cuffed ETT, you select a smaller size than the traditional formula² and inflate the cuff until the leak is at 20 cm H₂O. If there is no leak, then the ETT is replaced with the next smaller size and the process is repeated. Recommendations or formulas are only a rough guideline to ETT sizing, and the functional test is always the proper way to minimize errors. In all three of the cases from Sathyamoorthy et al.,¹ the likely problem is that the ETT was too large for the given patient. The conclusion by Sathyamoorthy et al. to “exercise caution” in using the Microcuff ETTs until evidence confirms they are safe for neonates is not warranted. It would appear that their technique is more likely to be at fault than the Microcuff ETT.

Steven M. Dunn, M.D., Baystate Medical Center, Tufts University Medical School, Springfield, Massachusetts. steven.dunn@bhs.org

References

Fig. 1. Cross-section of three 9-French endobronchial blockers Arndt, Cohen, and Uniblocker compared with a 10-French suction catheter.

Mourisse et al. comment that intermittent suctioning increases the risk of negative pressure pulmonary edema. Intermittent suctioning is the routine practice of many anesthesiologists and one that I have used in hundreds of patients without any complications. Surely, if the risk was significant, the literature would have been flooded with case reports of pulmonary edema.

With regard to the confusion concerning the low-volume, high-pressure cuff of the EZ-blocker, I like to thank the authors for the clarification. The occluding cuff pressure of the Cohen, Arndt, and the Uniblocker is between 30 and 40 cm H₂O.² If the cuff of the EZ-blocker has a high pressure of 110 cm H₂O, I would advise caution when using the EZ-blocker for an extended time to avoid the risk of mucosal damage if the bronchial venous circulation is compromised.

No device is perfect. Anesthesiologists should be familiar with the advantages and the disadvantages of each device and select the one that is best for his/her patient.

Edmond Cohen, M.D., Icahn School of Medicine at Mount Sinai, New York, New York. edmond.cohen@msnyuhealth.org

References

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Steven M. Dunn, M.D., Baystate Medical Center, Tufts University Medical School, Springfield, Massachusetts. steven.dunn@bhs.org

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