sensory analgesia on both occasions. Furthermore, the volunteer was thin, anatomic landmarks were normal, and both procedures were technically uncomplicated. Cerebrospinal fluid (CSF) was aspirated before and after injection of the local anesthetic during each procedure. One anesthetic was performed with 50 mg lidocaine and the other with 50 mg lidocaine plus 0.2 mg epinephrine. The maximum sensory block level was L3 on one occasion and L4 on the other.

As you know, our group has performed numerous studies in which each volunteer received two, or more, spinal anesthetics. During the conduct of these studies, we became impressed by the relative consistency in peak sensory block level achieved in individual patients. Indeed, the consistency in volunteers with extremely low or high sensory block levels was the primary incentive for performing axial imaging. We suspected that anatomic variability may correlate with variability in spread of spinal anesthesia.

In retrospect, we are fortunate to have enrolled a volunteer with such an extreme CSF volume (approximately 4 standard deviations more than the mean). The finding that peak sensory block height in this volunteer was several standard deviations less than the mean of the group supports our conclusion regarding the relation between CSF volume and the distribution of spinal anesthesia. Although we believe that data from this patient should be included in the statistical analysis and that our conclusions are valid, we caution that there is no magic to the 0.05 threshold for statistical significance. Despite achieving the threshold for statistical significance, the correlation we observed could still be caused by chance. Similarly, we do not believe it is prudent to completely dismiss an interesting correlation just because the *P* value is 0.07. We fully agree that additional data are necessary to conclusively establish the relation between lumbosacral CSF volume and the extent and duration of spinal anesthesia. We hope that additional studies will be performed to either confirm or refute our conclusions.

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The Cuffed Oropharyngeal Airway and Management of the Difficult Airway

To the Editor:—We read with interest the case report by Uezona *et al.*[1] regarding the use of the cuffed oropharyngeal airway (COPA) as an adjunct to the management of the difficult airway.

The authors comment on the loss of oropharyngeal tone after general anesthesia and the use of a COPA to maintain a patent airway with spontaneous ventilation during fiberscopy by connecting the anesthesia circuit directly to the 15-mm connector of the COPA. The authors state "the COPA eliminates the need of an assistant who holds the mask and applies a chin lift/jaw thrust, which may make this device more useful than the endoscopic mask." In our experience, however, the COPA does not always eliminate the need to apply a chin lift/jaw thrust, and, in the first of the two cases reported, an assistant provided "slight neck extension and modest chin lift" for an adequate airway. Also, a recent study[2] has suggested that, despite good position of the COPA, as confirmed by fiberscopic examination, the cuff is not sealed tightly in the upper pharynx, and ventilation of the lungs with positive pressure is more secure with a face mask while the COPA is in place and inflated than when it is attached directly to the breathing system.

The authors also describe a series of 25 patients with normal airway anatomy who underwent fiberoptic intubation alongside the COPA. As the fiberscope was passed down the nostril it was deviated from the midline, forcing the fiberscope to pass around the lateral side of the cuff of the COPA with a view of the larynx at the 9-o'clock position. A 90° rotation and a 90° downward bending of the distal tip was required for visualization of the vocal cords. This technique may not be optimal in a patient with a difficult airway in which a midline approach will most readily direct the fiberscope to the larynx. The COPA in this respect compares unfavorably with a number of devices available[3,4,5] that allow the fiberscope to enter the pharynx in the midline and that require minimum rotation or manipulation of the distal tip.

Inflation of the cuff of the COPA, in theory, widens collapsed pharyngeal structures, leading to a better chance of producing a patent airway; and it may be useful when ventilation through a face mask alone is difficult.[6] However, the COPA may not be ideal in the difficult airway because the seal in the upper pharynx is not always tight, airway manipulation by an assistant may still be required, and visualization of the larynx during fiberscopy may be more difficult because the midline approach is not possible.

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In Reply:—We thank Patel *et al.*[1] for their interest in our article describing the use of the cuffed oropharyngeal airway (COPA) in the management of the difficult airway and nasal fiberscopic intubation.

We agree that the COPA does not always provide hands-free airway support as shown in the recent article.[2] However, the manual support required when using the COPA is not as extensive as with the endoscopic mask. For example, the first patient in our report[1] required only a gentle chin lift with one finger. More importantly, as shown in our second case,[1] the need for additional airway support can often be eliminated with the proper use of the white rubber strap (commercially supplied with the COPA) or a slight neck rotation to a side, or both.

The study Dr. Patel cited as an evidence for the relative ineffectiveness of the COPA compared to the endoscopic mask in supporting ventilation[3] is not applicable because the authors used muscle relaxants and compared the COPA with a face mask while using positive ventilation. However the COPA, similar to the laryngeal mask airway, is designed predominantly for use during spontaneous respiration and NOT for paralyzed patients. Muscle relaxation, by reducing the tone of the upper airway muscles, presumably renders the pharyngeal seal by the COPA less effective.

We admit that the nasal tracheal intubation with the COPA in place requires somewhat complicated manipulations, as described in the letter, probably because the fiberscope passes around the lateral side of the cuff of the COPA. However, we found these technical difficulties relatively easy to overcome, as evidenced by the steep learning curve in our study.[1] Moreover, we had very positive feedback from both resident and staff anesthesiologists. Residents may perform fiberoptic intubation at their own pace while the patient is asleep. For staff, maintaining an adequate airway and an optimal depth of anesthesia provided by the COPA enhances patient safety while teaching fiberoptic intubation. Therefore, we believe our technique facilitates the teaching and learning of fiberoptic intubation.

In conclusion, our case report suggests that (1) in cases in which difficult intubation is anticipated, the COPA permits spontaneous breathing and inhalation anesthesia while nasal fiberoptic intubation is being performed and (2) the presence of the COPA does not interfere with the passage of the fiberscope.

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