

The Olympus PF 27M® (2.7 mm OD, 55 cm, \$10,000) allows over-the-scope endotracheal intubation with a 3.5 mm ID tube, but not a 3.0 mm ID tube. The instrument cannot, however, be recommended for the procedure due to the high risk of fracturing its very fragile light-transmitting fibers.

Finally, it has not been our intent to suggest that infants with upper airway pathology should be managed by inexperienced anesthesiologists. On the contrary, our policy is to treat these infants like the hedgehog's mate—with great caution.

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### Continuous Intercostal Nerve Block

*To the Editor:*—I read with interest the report by Middaugh *et al.* (ANESTHESIOLOGY 63:214-216, 1985) of the use of continuous intercostal nerve blockade for pain relief in a patient with multiple rib fractures. The clinical course of this patient was typical of the course of patients I described in a previous study\* in terms of both quality of analgesia and onset of tachyphylaxis. I can find no fault with the described technique but was somewhat surprised to see that the authors considered the effect to be based on epidural blockade. I believe that the major benefits of this technique over thoracic epidural block are its simplicity, the lessened danger of serious adverse effects, and in particular, the complete lack of autonomic effects—likely if analgesia is produced over a large number of dermatomes with epidural block.<sup>1</sup>

In my study, using intercostal nerve blockade, patients with up to eight fractured ribs were rendered pain free without hemodynamic disturbance. In most cases, these patients could not delineate the extent of local anesthetic spread, unlike the patient described by Middaugh *et al.* The extent of the sensory block described seems inconsistent with the volume of local anesthetic used, and the minimal accompanying autonomic disturbance makes one suspicious of the ability of the patient truly to appreciate

these sensory changes. In many of my patients, hyperesthesia was appreciated, which further complicated sensory denervation mapping.

To study the distribution of such large volumes of local anesthetic after intercostal blockade, I undertook a study in cadavers and investigated this distribution (of India ink) under direct vision.<sup>2</sup> In brief, these studies indicated that this block occurred due to subpleural tracking of local anesthetic and not by spread of solution to the epidural space. This would appear to be in direct conflict with the results of Middaugh *et al.*, and one must therefore question the sensitivity of their technique for flow study in their patient. I believe it is particularly important that epidural block be refuted in continuous intercostal nerve blockade, as otherwise one of the major safety benefits of this technique would be called into question.

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