

tube to the desired location.<sup>2-6</sup> Our technique resulted in a success rate of 89-97%<sup>2,4-6</sup> for left bronchial catheterization and 97-100% for right bronchial catheterization.<sup>2,4,5</sup> When a curved-tip catheter is not available, one can be easily constructed using a cigarette lighter; a guide mark is made using a felt tipped pen.<sup>6</sup> In addition, we also developed a device for determining location of a catheter tip in the bronchi using a stethoscope and an audible sound signal.<sup>7</sup> When our device is not available, a sound signal generator can be used alternatively.

Using our technique we have successfully treated atelectasis and pulmonary edema without the need for fiberoptic bronchoscopy.<sup>8</sup> Furthermore, our technique can be used for selective bronchoalveolar lavage.

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*In Reply:*—I appreciate the interest and constructive comments of Dr. Y. Kubota and Y. Toyoda. They propose a modified technique for selective catheterization of right and left bronchi and also of bronchi of the upper lobes. Although in general the location of the catheter within the bronchial tree does not appear to be critical in the bacteriologic diagnosis of nosocomial pneumonia,<sup>1</sup> the possibility of a selective catheterization of some lung segment could be important in specific cases such as unilateral bacterial pneumonia. I agree with their proposition and will soon modify our catheter according to their recommendations.

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## Use of Purified C<sub>1</sub> Esterase Inhibitor in Patients with Hereditary Angioedema

*To the Editor:*—Wall, Frank, and Hahn recently reported their experience with 25 patients with hereditary angioedema requiring surgery.<sup>1</sup> We are most surprised that use of purified C<sub>1</sub> esterase inhibitor concentrate was not suggested as prevention, especially for patients undergoing surgical procedures at high risk (dental and ENT surgery) or those requiring tracheal intubation. Its efficacy in surgery as well as for the treatment of a crisis has long been known.<sup>2-5</sup> Of course,

fresh frozen plasma (FFP) contains the missing enzyme, but it also carries all the complement proteins, especially C<sub>4</sub> and C<sub>2</sub>, which could keep a crisis going. Moreover in contrast to C<sub>1</sub> esterase inhibitor concentrate, FFP may also transmit viral diseases.

We recently had to anesthetize two patients with hereditary angioedema, both of whom received C<sub>1</sub> esterase inhibitor. Patient 1 required extensive dental surgery and patient 2 underwent removal of

## REFERENCES

1. Rouby JJ, Rossignon MD, Nicholas MH, Martin de Lassale E, Cristin S, Grosset J, Viars P: A prospective study of protected bronchoalveolar lavage in the diagnosis of nosocomial pneumonia. *ANESTHESIOLOGY* 71:679-685, 1989
2. Kubota Y, Magaribuchi T, Toyoda Y, Murakawa M, Urabe N, Asada A, Fujimori M, Ueda Y, Matsuura H: Selective bronchial suctioning in the adult using a curve-tipped catheter with a guide mark. *Crit Care Med* 10:767-769, 1982
3. Kubota Y, Toyoda Y, Kubota H, Sawada S, Ishida H, Murakawa M, Mori K, Tokuda T: Selective left bronchial suctioning in infants and children. *Crit Care Med* 14:902-903, 1986
4. Kubota Y, Toyoda Y, Kubota H, Sawada S, Asada A, Sasai S, Ueda Y, Matsuura H: Is a straight catheter necessary for selective bronchial suctioning in the adult? (letter) *Crit Care Med* 14:755-756, 1986
5. Kubota Y, Toyoda Y, Kubota H, Asada A: Selective bronchial suctioning (letter). *Chest* (in press)
6. Kubota Y, Toyoda Y, Sawada S, Murakawa M: The utility of a handmade curve-tipped catheter on selective left bronchial catheterization (letter). *Crit Care Med* 11:765-766, 1983
7. Kubota Y, Toyoda Y, Ueda Y, Fujimori M, Mori K, Okamoto T, Yasuda T, Matsuura H: Device for determining location of an endotracheal catheter tip. *Crit Care Med* 12:125-126, 1984
8. Kubota Y, Toyoda Y, Kubota H, Asada A, Sugiyama K: Treatment of atelectasis with selective bronchial suctioning: 1. Use of a curved tipped catheter with a guide mark. *Chest* (in press)

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## REFERENCE

1. Johanson WG, Seidenfeld JJ, Gomez P, De Los Santos R, Coalson JJ: Bacteriologic diagnosis of nosocomial pneumonia following prolonged mechanical ventilation. *Am Rev Respir Dis* 137:259-264, 1988

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