

evidence that HFJV may prevent aspiration,¹ we do not propose to routinely supplant awake intubation with this technique. We assert that multiple strategies are necessary for dealing with patients who have difficult airways. The technique we described is useful in selected circumstances, and should be added to the anesthesiologist's armamentarium.

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Hazards of a New System for Placement of Endotracheal Tubes

To the Editor:—In their report on a technique for placement of endotracheal tubes to prevent endobronchial intubation, Owen and Cheney¹ advocate a position of 23 cm for men and 21 cm for women as marked on the endotracheal tube at the incisor teeth. While no endobronchial intubations occurred in their "study group" with this system, 14 patients (4.6%) were noted to have the tip of their endotracheal tube 9 cm or more above the carina. The authors observed no cases of tracheal extubation. They noted the study by Conrardy *et al.*² which showed up to 5.2 cm outward movement of endotracheal tubes on extension of the head; however, Owen and Cheney state that ". . . migration of the cuff between the cords would be easily recognized by the presence of an airleak with positive pressure ventilation."

Conrardy *et al.*² note the length of the adult human trachea to be 12 ± 3 cm. Thus, the patients found by Owen and Cheney to have high tube placements may be at great risk for accidental extubation after head extension. Such an occurrence would clearly be hazardous and merits the rejection of their system. I have found

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In Reply:—Dr. Sosis' letter focuses attention on a potential problem with the technique of securing oral endotracheal tubes, which we recently described. We can only say that accidental extubation was not a problem in 304 patients studied in a prospective fashion in an ICU setting. As mentioned in the article, the tube tip may

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that accidental extubations are not always quickly recognized, especially if the anesthetist does not have good access to the head.

Interestingly, in Owen and Cheney's "control group," consisting of those patients whose endotracheal tubes were not adjusted after intubation, only two patients (0.7%) had the tip of the tube 9 cm or more from the carina. The conclusion that the "control" group is at greater risk for endobronchial intubation must be compared to its potential for fewer extubations. In my practice, I have found the latter to be more dangerous.

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have been higher in the x-ray than *in vivo* because of the natural extension of the head when the patient was on an x-ray cassette. This extension would tend to move the tip higher. We disagree in general that accidental extubation is harder to *diagnose* than endobronchial intubation. Even with a pulse oximeter to make a prompt