the child's mouth after birth as a religious custom.

Most reported cases of esophageal FB in infants have been of accidental ingestion presenting well beyond the neonatal period(1). We did not come across a report of a case as young as 4 hours.

We are inclined to change our practice after this experience. We now choose to perform preoperative bronchoscopy in clinically diagnosed EA. It confirms or excludes the diagnosis, defines the level, number and size of the fistula, and also the fistula can be occluded to improve ventilation.

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Continuous Positive Airway Pressure–A Gentler Approach to Ventilation

Read with interest the article by Upadhyay, *et al*.(1). Our unit has been using this technique for the past ten years.

1. The use of nasal CPAP has dramatically brought down the need for intubation and mechanical ventilation. There are several commercially available CPAP devices, *e.g.*, Hudson CPAP, Argyle CPAP, INCA prongs, Infant Flow Driver (IFD), Aladdin II *etc*. The Hudson Prongs system (Hudson-RCI, Temecula, CA 92589) was created and used at Columbia in 1973. Biggest prongs that comfortably fit the nostrils are used to avoid loss of pressure. Flow required is affected by the degree of "leak" of gas from the infant's nose and mouth and can be 6 L/min or greater. The advantage is that the adequacy of flow can be seen and heard. If the leak is high the flow causing bubbling is too low which then stops. If the flow is too high the bubbling becomes very vigorous. IFD needs flows in excess of 8 L/min to generate pressures around 5 cm H_2O. The "expiratory" limb of the IFD is unusual in that it is open to the atmosphere. Potentially, the baby can inspire with a higher flow than that delivered through the inspiratory limb, reducing possibility of the pressure falling with large inspirations. More research is needed to clarify its clinical importance. Our experience favors HP system, probably due to the high frequency like effect.
2. The general effect of mouth closure is to raise pharyngeal pressure and it may fall significantly if the mouth is open even slightly. Our unit uses special caps, which come along with a chinstrap to avoid the fluctuations in the delivered pressure seen with intermittent mouth opening. CPAP sometimes causes gaseous distension, but this is uncommon, as the tone in the upper and lower esophageal sphincters is higher than the applied CPAP. It seems appro-

priate to use orogastric tube open to atmosphere to vent any gas. If it occurs, "CPAP belly syndrome" is likely to be benign.

3. On issue of instituting nasal CPAP respiratory distress from birth, our unit policy favors early CPAP in premature babies <32 weeks gestation and <1500 grams birth weight. In the delivery suite/ operation theatre, we provide this with the "Neopuff Resucitaire" and then switch to HP CPAP when in nursery. The IFDAS trial, randomized a total of 234 very preterm neonates into one of four treatment arms: early CPAP after intubation and prophylactic surfactant, early CPAP with or without subsequent rescue intubation and surfactant, early intubation and ventilation with prophylactic surfactant, and management at the physicians' discretion. Although the short-term duration of mechanical ventilation was reduced in those receiving nasal CPAP (with or without surfactant) no difference was found in the rate of Chronic Lung Disease (CLD)(2).

4. The strategy of a short intubation to deliver surfactant, with subsequent extubation to CPAP, compared with CPAP alone(3) or with ongoing mechanical ventilation(4) has so far shown no difference in CLD incidence, and longer term outcomes remain unresolved. For weaning, we trial an infant off CPAP once they are stable at a CPAP of 4 cm in air. Some units cycle the infants through periods on and off CPAP before stopping.

6. Finally, experimental work in animals suggests that inhaled nitric oxide (iNO), has a synergistic effect with airway recruitment strategies such as CPAP in improving oxygenation. Lidwall, *et al.* modified a commercially available system to enable the concomitant delivery of iNO and demonstrated safe and reliable delivery(5). Further trials are needed.

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