Oxygen Supplementation during Endotracheal Intubation of Infants

To the Editor: — Neonates who need high ambient oxygen concentrations to maintain adequate arterial oxygen tension values react rapidly to interruption of this supplemental oxygen. Particularly during laryngoscopy and endotracheal intubation, these patients may experience hypoxia, with subsequent bradycardia and other cardiac arrhythmias. Infants, especially neonates, have diminished oxygen reserves, and are therefore more vulnerable to these complications than are adults or older children.

Taping a feeding tube to the laryngoscope blade has been suggested to provide low-flow oxygen during laryngoscopy for intubation. Adequate maintenance of arterial oxygen tension values using this technique has been demonstrated by Wung et al., using a transcutaneous $P_a$ electrode. However, we have experienced problems in actual application of this technique. Often the taping of the tube on the blade is not secure, and the tube dislodges during the procedure. The procedure is interrupted, and it is then very difficult to retape the tube to a damper blade in minimum time.

A modification of the laryngoscope blade itself is suggested to overcome the problem of dislodgment of the oxygen tubing during intubation. Two small holes (fig. 1 A) 0.086 inch in diameter (using a No. 44 bit) are drilled in the blade to allow a no. 5-French feeding tube to be threaded around it (fig. 1 B) to deliver oxygen at its tip. A flow of 2 l/min is suggested by Wung et al., although we have found flows from 2–6 l/min to be possible through the no. 5-French tube.

Advantages of this modification include its simplicity, allowance for use of disposable tubing, secure attachment of the oxygen tubing, and unimpaired vision during laryngoscopy. In addition, this modification does not interfere with the use of the blade should oxygen supplementation not be desired.

REFERENCES


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