

Use of a Stylet Does Not Improve Neonatal Intubation Success

First-attempt success rates of emergent neonatal intubation by trainees were similar with and without use of a stylet.

In a randomized trial, investigators compared success rates of first-attempt neonatal emergency intubation (defined as in the delivery room or within 24 hours after birth) with and without use of the Satin Slip intubation stylet. Intubation was performed by pediatric residents and fellows at an Australian tertiary prenatal center. No premedication was used in the delivery room, whereas premedication with morphine or fentanyl, atropine, and suxamethonium was used in the neonatal intensive care unit (NICU).

A total of 302 attempts were made in 232 infants (median gestational age, 29 weeks), with 146 intubations performed in the delivery room and 156 in the NICU. First-attempt success rates were similar between the stylet and no-stylet groups (57% and 53%). Success rates did not differ between groups in subgroup analyses by provider level of training and infant weight. The lowest oxygen saturations and heart rates during intubation were similar in the two groups, with 25% of infants developing bradycardia (heart rate <100 beats per minute). The percentage of patients with blood-stained aspirates within the first 24 hours was similar with and without the stylet (10% and 13%).

Comment: The low first-attempt success rate in this study is a reflection of infant anatomy rather than choice of equipment. Familiarity with the intubation technique is likely the best predictor of neonatal intubation success, and providers should choose the technique (with or without a stylet) they are most comfortable with.

— Katherine Bakes, MD

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