

Chin Lift Really Does Work in Children

The chin lift maneuver is often performed to improve upper airway patency in obtunded patients, but little is known about precisely how, or if, it works. Researchers from Switzerland studied the maneuver in ten sedated, spontaneously breathing children ages 2 to 11 years undergoing elective magnetic resonance imaging.

The children were all placed in the same position on the MRI table with the head very slightly extended (a line drawn from the lateral canthus of the eye through the tragus made a 110° angle with the table). Baseline measurements of the airway were performed using MRI. Adhesive tape was then applied to lift the chin and close the mouth, simulating the chin lift maneuver in a standardized fashion; care was taken not to extend the neck. Measurements were repeated and showed significant increases in anteroposterior and transverse diameters at the level of the soft palate, tongue, and epiglottis. Cross-sectional area at these three levels increased by 103%, 160%, and 160%, respectively.

Comment: The simple chin lift maneuver brings the chin up. It is distinct from the head tilt, which requires neck extension, and the jaw thrust, which requires anterior movement of the entire mandible. The effectiveness of the chin lift in this study is striking. The technique is likely applicable to obtunded pediatric trauma patients in whom cervical spine immobilization may be compromised by either of the other two maneuvers.

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Reber A et al. Effect of combined mouth closure and chin lift on upper airway dimensions during routine magnetic resonance imaging in pediatric patients sedated with propofol. *Anesthesiology* 1999 Jun 90 1617-1623.