

Airway Obstruction with Sellick's Maneuver, Part II

In another investigation of potential airway obstruction associated with cricoid pressure, these authors attempted to better quantify ventilatory impairment and the effect of the technique used to apply the pressure.

Fifty-two women (American Society of Anesthesiologists class I or II) undergoing elective surgery were enrolled. After induction and paralysis, the investigators measured tidal volume and inspiratory pressures under 4 conditions of different cricoid pressure and technique. Cricoid pressure was applied with one hand by the same operator for all patients. Before applying cricoid pressure, the operator practiced the force on a scale. The ventilator was blinded to the technique. Complete airway obstruction, defined as less than 200 ml expired tidal volume, occurred in none of the patients without cricoid pressure, in 1 (2%) at 30 newtons of backward pressure, in 29 (56%) at 30 N of pressure applied in an upward and backward direction (the BURP maneuver), and in 18 (35%) at 44 N.

Comment: In this study, which better approximates ED rapid sequence intubation conditions, the degree of ventilatory obstruction associated with the traditionally recommended 10 pounds (44 N) of pressure is concerning. This should not discourage use of Sellick's maneuver to prevent passive regurgitation or of the BURP maneuver to improve visualization. Rather, when ventilation is difficult, reduction in the cricoid pressure and avoidance of upward pressure may improve ventilation. Further studies are warranted to explore whether 6.5 pounds (30 N) is adequate to prevent regurgitation.

— *RJ Vissers, MD*

Published in Journal Watch Emergency Medicine June 1, 2000

CITATION(S):

Hartsilver EL and Vanner RG. Airway obstruction with cricoid pressure. *Anaesthesia* 2000 Mar 55 208-211.