To BURP or Not to BURP?

Application of cricoid pressure during rapid sequence intubation (RSI) to prevent regurgitation and aspiration of stomach contents was proposed by Sellick in 1961. Despite a lack of solid evidence of its efficacy and concern that it sometimes worsens glottic view, the "Sellick maneuver" has become a standard of care. The BURP maneuver (backward, upward, and rightward pressure on the larynx), introduced by Knill in 1993, has been shown to improve glottic view during laryngoscopy. In a prospective, double-blind, randomized, cross-over study, these authors tested the hypothesis that application of the BURP maneuver combined with the Sellick maneuver (together called the modified BURP maneuver) would enhance the glottic view.

In 43 adult patients (American Society of Anesthesiologists class II-IV) scheduled for elective surgery, anesthesia was induced with fentanyl, propofol, and rocuronium. Three maneuvers -- Sellick alone, modified BURP, and a control maneuver (no pressure) -- were then applied in random order by one trained assistant during separate attempts at laryngoscopy. During each attempt, one experienced laryngoscopist graded the laryngoscopic view as good (part of the glottis seen), poor (only arytenoids seen), or no view (only epiglottis seen).

Compared with the control maneuver, the modified BURP maneuver worsened the laryngoscopic view in 30% of cases ($P=0.007$), and the Sellick maneuver alone worsened the view in 12.5% ($P=0.279$). There was no difference in view in 65% of cases with the modified BURP maneuver and in 85% with Sellick maneuver. All patients were successfully intubated.

Comment: These results are interesting in that two common maneuvers designed to improve success of laryngoscopy (BURP) or to prevent aspiration (Sellick) do more harm than good when used together, at least in patients with fairly good laryngoscopic views when no maneuver is used. The question that remains to be answered is: Why continue to research ways to modify and use the antiquated technology of laryngoscopes, when modern technology (such as video laryngoscopy and rigid and flexible fiberscopes) is readily available, cheap, easier to teach and use, and more successful?

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