Cricoid Pressure Should Not Be Used with the Pentax Airway Scope

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In a randomized trial, cricoid pressure impeded tube passage through the glottis and prolonged intubation time.

Cricoid pressure has been associated with worsened glottic views and difficult tube placement during conventional laryngoscopy and intubation. It has not been previously studied in combination with the Pentax Airway Scope (AWS), a video laryngoscope with an integrated screen and tracheal tube channel.

In a single-center operating room trial, 60 patients aged 20 to 85 years were randomized to intubation with the Pentax AWS with either cricoid pressure or “sham” pressure. Sham pressure was accomplished by placing fingers on the cricoid ring but not applying downward force. Cricoid pressure was provided by an anesthesiologist who was trained to apply 30N of downward force using a cricoid simulator. Patients with anticipated difficult airways and those needing emergent intubation were excluded. Patients were induced with standard doses of propofol and remifentanil and relaxed with rocuronium. Experienced anesthesiologists, who had performed at least 100 Pentax AWS intubations, performed all intubations.

In the cricoid-pressure group, compared with the sham-pressure group, median intubation time was 13 seconds longer, and significantly more attempts were required to intubate successfully. Difficulty of laryngoscopy was rated similarly in the two groups, whereas tube passage through the glottic aperture was rated significantly more difficult in the cricoid-pressure group. Glottic visualization (assessed by Cormack-Lehane class and percent of glottic opening scores) was similar between the two groups.

Comment: The routine use of cricoid pressure continues to come under scrutiny. It should not be applied when using the Pentax AWS, or much else for that matter.

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