Obesity Makes Intubation More Difficult

Controversy continues about intubation difficulty in obese patients: Is obesity itself the cause, or is intubation difficult in obese patients for the same reasons that can make it difficult in nonobese patients? These investigators studied intubation characteristics of 134 lean (body-mass index [BMI] <30 kg/m$^2$) and 129 obese (BMI ≥35 kg/m$^2$) patients undergoing general anesthesia for routine surgery. Five difficult-airway predictors were assessed preoperatively: Mallampati Score, range of head and neck motion, width of mouth opening, presence of buck teeth, and presence of mandibular recession. Other abnormalities, such as tumors, anatomic abnormalities, and loose teeth, were also noted.

After induction of anesthesia, intubation was attempted initially with a MAC-3 laryngoscope, and the intubation difficulty score (IDS) was recorded. There were no intubation failures. Difficult intubation, defined as an IDS ≥5, was significantly more common in obese patients (16%) than in lean patients (2%). Ideal intubation (IDS=0) was significantly less common in obese (43%) than in lean (62%) patients. In a multivariate analysis, a Mallampati score of III or IV was an independent predictor of difficult intubation, but BMI was not. Desaturation occurred more rapidly in obese patients than in lean patients.

Comment: The authors contend that obesity itself is a marker for difficult intubation, but it's not quite that simple. This study reinforces previous findings that intubation is indeed more commonly difficult in obese patients, but the reason for this is that obese patients more often have markers of difficult intubation (such as poor Mallampati scores or mouth opening) than their nonobese counterparts. The take-home messages: Assess obese patients very carefully for markers of difficult intubation, because it is likely some are present, and anticipate more rapid oxygen desaturation, because high body-mass burden increases oxygen consumption.

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