New Airway Management Device Offers Nothing New

The Airway Management Device (AMD) is similar to the laryngeal mask airway (LMA), but it has 2 silicone cuffs: The distal is inserted and inflated over the esophagus, and the larger, proximal cuff is inflated in the pharynx. The putative advantages of the AMD include blind insertion, need for minimal oral opening, and occlusion of the esophagus. In an observational study, investigators evaluated the AMD in 105 fasted patients undergoing elective surgery. Successful ventilation was defined as visible chest movement, tidal volume of 7 mL/kg, and O₂ saturation greater than 95 percent. Partial obstruction was not defined.

An adequate airway was established initially in 95 cases (90.5 percent), of which 85 were patent and 10 were partially obstructed. In the remaining 10 patients, placement of the device resulted in a completely obstructed airway and inability to ventilate. First attempts to place the device had a success rate of 65.7 percent. During maintenance of anesthesia in the 95 patients, 18 airways became partially obstructed and 2 became completely obstructed, despite frequent manipulations (mean, 0.42 per patient) to improve patency. Other complications were infrequent, and there were no cases of regurgitation. Cuff pressure was measured in 12 cases and exceeded 100 cm/H₂O in 8. In all 10 failures, the airway was graded as Mallampati class I or II and the patient was successfully intubated with an LMA or endotracheal tube.

Comment: These results are discouraging. The failure rate is high for a controlled setting (rates were 1 percent to 3 percent in similar studies of the LMA), and maintenance of the airway was a considerable concern. Furthermore, the high cuff pressure could lead to tissue damage. A positive result from a controlled, comparative study may save a revisit to the drawing board, but until then, the AMD has no apparent role in our airway armamentarium.

— RJ Vissers

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