Intubating Laryngeal Mask Airway: What Size Is Right?

Recommendations for selecting the size of the intubating laryngeal mask airway (ILMA) are based on height, weight, sex, and nose-chin distance. These authors assessed ventilation quality and intubation success with 3 different mask sizes in 50 men and 50 women undergoing elective general anesthesia.

In each patient, a size 3, 4, and 5 ILMA was inserted in random order and inflated with 20, 30, and 40 mL of air, respectively. A second operator, blinded to ILMA size, assessed the quality of ventilation and fiberoptically determined the position of the epiglottic elevating bar. A third operator, blinded to all information, attempted intubation through the ILMA.

All ILMAs were inserted on the first attempt. For men, ventilation quality, correct mask positioning, and intubation success were better with the size 4 or 5 mask. For women, ventilation was better with the size 4 or 5 mask, but correct positioning and intubation success were similar with all 3 mask sizes. Ventilation failure occurred in no women and 7 men; 6 of the failures occurred with a size 3 mask. Intubation success was 100% when the mask was correctly positioned and 0% when it was not.

Comment: The best way to predict successful intubation when using the ILMA is to achieve noiseless, optimal ventilation. If ventilation is not ideal, repositioning or changing mask size may improve the success of both ventilation and intubation. The weight-based guidelines (30-50 kg, 50-70 kg, and greater than 70 kg for mask sizes 3, 4, and 5, respectively) still seem the best starting point for choosing mask size.

— Ron M. Walls, MD, FRCPC, FACEP

Published in Journal Watch Emergency Medicine June 12, 2002

CITATION(S):