Pediatric Air-Q ILA Is an Effective Primary Airway Device


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The air-Q® is a single-use intubating laryngeal airway (ILA). To determine its operating characteristics in children, researchers evaluated insertion of weight-appropriate devices in 110 healthy children (weight <50 kg) undergoing elective surgery. Oropharyngeal leak pressures and tidal volumes were measured with the head in five positions: neutral, maximum flexion, maximum extension, and 90 degrees to the left and right. Three anesthesiologists performed all insertions. Devices were provided by the manufacturer.

All insertions were considered easy and all were successful: 98% on the first attempt and 2% on the second attempt. Median oropharyngeal leak pressures in the neutral-head position ranged from 14 to 23 mm H2O and increased with head flexion for all device sizes. Median tidal volumes did not differ with head position. For all device sizes, ventilation was adequate (chest rise with or without audible leak) in 98% of insertions. On evaluation with a fiberoptic laryngoscope, vocal cords were visible in 93% of children. The air-Q ILA was removed prematurely in 6 patients because of low seal pressure, gastric insufflation, hypoxia that was subsequently determined to be from a cardiac shunt, and an unknown reason. Gastric insufflation occurred with 10% of insertions and minor mucosal injury with 5% of insertions.

Comment

The air-Q ILA was effective and easy to use in this healthy pediatric population and is a reasonable choice for a primary or backup airway management for children with normal airways. The easy visibility by fiberoptic laryngoscopy suggests a high likelihood of successful intubation through the device.

Editor Disclosures at Time of Publication

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