

Overuse and Failure to Track Number of Uses of LMA™ Airways

Clinical Consequences

Tracking the number of uses is essential to preventing overuse of a reusable LMA™ airway. Continued use of LMA™ airways beyond 40 uses increases the probability of device malfunctions. For example, reports of airway failure, such as fractured airway tubes, have been associated with masks used more than the recommended number of times.

In most cases, the breaks have occurred on emergence, and have been associated with biting down on the tube. Occasionally, large air leaks from tube breaks have been noticed immediately after insertion. In one case, a large air leak was noticed after the airway circuit was moved, which created a twisting force, displacing the LMA™ cuff, and tearing the airway tube.

If a fractured airway tube occurs, there is the risk of airway obstruction, hypoxia, and aspiration of tube fragments. In all published cases and reports to LMA North America to date, there have been no permanent clinical sequelae.



LMA Classic™ used 71 times

Published Reports of Fractured LMA™ Airways

1. Crawford M, Davidson G. A problem with a laryngeal mask airway. *Anesthesia* 1992; 47:46 Reply by Woods
2. Hefferman AM, White M, Curran A, Colbert SA. Laryngeal mask airway severed by biting. *Eur J Anaesthesiol* 2003; 20:74-75
3. Kramer-Kipler OT. Removal of the laryngeal mask airway during light anesthesia. *Anesthesia* 1992; 47:816
4. Kuhn LH, Use of the LMA in patients with orthodontic appliances. *Am J Anesthesiol* 2000;27(3):64
5. Quinlan J. Reinforced laryngeal mask severed by biting. *Anaesthesia* 2000; 55:186
6. Squires SJ. Fragmented laryngeal mask airway. *Anaesthesia* 1992; 47:274. Reply by Woods.
7. Vickers R, Springer A, Hindmarsh J. Problem with the laryngeal mask airway. *Anaesthesia* 1992; 47:639
8. Wong DR, McGuire GP. Fractured laryngeal mask airway (LMA). *Can J Anesth* 2000; 47:716
9. Yamaguchi S, Mishio M, Okuda Y, Kitajima T. [Damage of a laryngeal mask airway during anesthesia.] *Masui* 2000;49:762-4
10. Zavaratto M. LMA Failure. *Anesth Intensive Care* 1996;24:119

Examples of Reports Received by LMA North America

Size 5 LMA Classic™, purchased 4 years earlier, broke during repositioning and occluded patient's airway. Airway was removed, patient was X-rayed, observed in PACU for 2.5 hours, and treated with Versed and Decadron.

Size 5 LMA Classic™, purchased 3 years earlier, tube broke from cuff after insertion. Cuff remained lodged in pharynx, emergency tracheostomy performed. Cuff eventually removed with McGill forceps. Patient observed in PACU.

How to Get the Best Results From Your Reusable LMA™ Airways

Follow the important points below to reduce the possibility of a fractured airway tube from occurring:

1. Track the number of times each LMA™ airway has been used and autoclaved, and limit the number to the recommended 40 uses. In one reported case the LMA™ airway had been manufactured 9 years earlier and had been used approximately 400 times. LMA North America provides a tracking card with every reusable device to facilitate the tracking process, or you may use one of your own design. Each reusable LMA airway has a unique serial number located at the proximal end of the airway tube. You can use this number or your own identification system.
2. Perform the pre-use tests prior to each use. Specific tests to ensure the integrity of the airway include checking its transparency, checking for cuts or tears, and doing the kink test. The airway tube will become discolored and lose its elasticity with age and autoclaving. Discoloration of the airway tube will prevent visualization of particles or fluid. A kinked tube may result in airway obstruction.
3. Use the standard insertion and fixation technique. Use of a rotational insertion technique or failure to secure the airway in place may result in significant torque on the airway tube, contributing to the likelihood of a fracture.
4. Use a bite-block. In most reported cases during emergence the patient bit down on the airway tube. If a bite-block had been in place this could have been prevented. Even if the tube had not been severed, cuts and tears can weaken the tube, making it more likely to fail in the future.