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Case Report

Complete separation of the tube from the mask of a reusable classic laryngeal mask airway: a case report

*Ali Shahriari**

Abstract

The laryngeal mask airway (LMA) is an important addition to the anesthetist's equipments. However, its usage may involve some complications. We have encountered an unusual and potentially serious complication using this equipment. A 45-year old man underwent cataract surgery under general anesthesia. After the induction of anesthesia, a size 4 of the reusable classic LMA was inserted without any difficulties and the cuff was inflated. After a little manipulation, the proximal tube of the LMA was separated from the distal part, leaving the distal mask inside the pharynx. The exit of the remaining portion of the LMA was very difficult and made the ventilation of the patient impossible. The patient's oxygen saturation decreased to 40%. The remaining portion of the LMA was removed by a great clamp and with an extreme effort. Then, an endotracheal tube was inserted and the patient was ventilated with 100% oxygen. After 6 hours, the patient was discharged with no apparent complications. The autoclave was used several times for the sterilization of the LMA.

KEY WORDS: Laryngeal mask airway, autoclave.

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The laryngeal mask airway (LMA) is popular because it is easy to insert and it provides a secure airway for the patients who breathe spontaneously. It is also useful for the patients who can afford effective assisted ventilation in elective and emergency situations without requiring endotracheal intubation or the visualization of the glottis. The laryngeal mask airway is an important addition to the anesthetist's equipments. However, its usage may involve some complications. We have encountered an unusual and potentially serious complication using this equipment.

Case presentation

A 45-year old man, who had 86 kg weight, underwent cataract surgery under general anesthesia. After the administration of fentanyl (150 µg), nesdonal (350 mg) and atracurium (30 mg), a size 4 of the reusable LMA was inserted without any difficulties and the cuff was inflated. After a little manipulation, the proximal tube of the LMA was separated from the distal part, leaving the distal mask inside the pharynx. The exit of the remaining portion of the LMA was very difficult and made the ventilation of the patient impossible. The patient's oxygen saturation decreased to 40%. With an extreme effort, the remaining portion of the LMA was removed and an endotracheal tube was inserted and the patient was ventilated with 100% oxygen. After 6 hours, the patient was discharged with no apparent complications. The autoclave was used several times for the sterilization of the LMA.

*Assistant Professor, Department of Anesthesia, Zahedan University of Medical Sciences, Zahedan, Iran.
e-mail: alibenmahdi@yahoo.com

Discussion

Since the Brain's publication about the laryngeal mask airway [1], this device has made a significant contribution to airway control. The complications associated with the LMA have been reported to occur during insertion, anesthesia, and upon the emergence. However, the difficulties are rare and usually minor. Complications are infrequent during the use of the LMA in the operating room. The most common problems which were encountered include the inability to position the LMA correctly, coughing and gagging during placement and removal, laryngospasm, and postoperative sore throat. However, mechanical problems are rare [2]. Two studies [3, 4] have demonstrated a high incidence of clenched teeth and biting the LMA (26% and 10%, respectively), when the airway is removed after laryngeal reflexes have returned. One of the complications which was reported by Brimacombe is the deflation of the LMA cuff secondary to a small leak during the operation [5]. Several case reports described the separation [6], transaction [7, 8], and the shattering of the LMAs [9]. These reports also involved reusable LMAs. There is only one case report which describes this event with a disposable LMA-unique [2]. Repeated sterilization with heat and chemicals was thought to cause the degradation of the silicone which results in brittleness and cracking [2].

Conclusion

Although the use of the LMA is associated with rare and minimal complications, re-sterilization may cause severe damage to this device. Therefore, the manufacturers put a limit of 40 times for re-sterilization. However, the numbers of the re-sterilizations have not been counted in the hospital.

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