

Letter to the Editor

Use of nasogastric tube in emergency situation to prevent LMA ProSeal down folding: a simple method

Sir,

Securing of airway and prevention of aspiration are of utmost importance during airway management in the field of anesthesia and emergency medicine. Now a days laryngeal mask airways are being very frequently used for securing airway in elective as well as emergency conditions. LMA-ProSeal™ (PLMA) (Laryngeal Mask Company, Henley-on-Thames, UK) has an added advantage over classical LMA (CLMA) as it has gastric port for insertion of Ryle's tube which allows suctioning of gastric contents. PLMA also allows ventilation with higher pressures so it is preferred over CLMA, The design of the PLMA reliably allows positive pressure ventilation up to 30–40 cm H₂O pressure.¹ Use of PLMA is not always a smooth ride and may offer certain difficulties.

A 20 year old male of average built weighing 60 kg of ASA 1 with Mallampati class 2 was posted for URSL (ureteroscopic lithotripsy) of ureteric calculi of right side ureter. Case was planned under GA with PLMA, routine monitoring with pulse oximetry, electrocardiography NIBP, capnography was done. Patient was premedicated with 2mg of midazolam, 150ug fentanyl and induced with 120mg of propofol, after loss of airway reflexes LMA-ProSeal size 4 was introduced in 1st attempt, but ventilation was not adequate as shown by inadequate chest rise, leaking of gases, and improper capnographic waveform. PLMA was manipulated by increasing/decreasing the depth of insertion to achieve adequate ventilation but it did not work. We tried to pass a Ryle's tube 14 fr through the side drain but it failed.

So assuming that the tip of PLMA was down folded which was responsible for inadequate seal and ventilation. This tip down folding of PLMA also prevented the successful placement of Ryle's tube. To overcome this problem PLMA was removed and reinserted with a 16 fr Ryle's tube preloaded in the gastric drain tube upto the tip of PLMA (Figure 1). It was successfully inserted and ventilation was adequate as shown by rising of chest & capnography. Ryle's tube was further advanced smoothly in the esophagus without any resistance.

The reported incidence of airway obstruction with PLMA has been found to vary from 2-10%.^{2,3} Increased

resistance is suspected with partial obstruction resulting from in folding of the PLMA cuff or down folding of epiglottis.⁴ The PLMA, with its large drain tube and cuff, may produce respiratory obstruction by displacing the cricoid cartilage anteriorly thereby exerting direct pressure on the arytenoid bodies and muscular processes.⁵ The above-mentioned problems also occur with CLMA, but are more frequent with PLMA due to its larger size and softer material.⁶ The problem of in folding and down folding of tip of PLMA can be prevented by preinsertion of Ryle's tube through gastric port upto the tip of the PLMA before insertion of PLMA.



Figure 1: Ryle's tube preloaded in the gastric drain tube to prevent PLMA downfolding.

We hereby give a simple method to overcome the common problem of down folding of LMA ProSeal and also on saving valuable time in insertion of suction catheter after LMA insertion.

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