Difficult in proseal laryngeal mask airway insertion: An unusual cause

Sir,

Proseal laryngeal mask airway (PLMA) is commonly being used in the management of patients with normal as well as difficult airway. There are multiple reasons for failed insertion of PLMA. Here, we describe an unusual technical problem with insertion of PLMA in an obese patient with normal airway.

A 30-year-old man was posted for globe repair surgery. His weight was 85 kg and body mass index was 35 kg/m². His airway examination revealed modified mallampati score of 3 with restricted mouth opening and short neck. After induction of anesthesia and successful bag and mask, insertion of PLMA was not possible by an experienced anesthesiologist, using the introducer tool insertion technique. While preparing the PLMA for reinsertion we noted that the cuff of PLMA was partially inflated with open red plug. Then the red plug was closed and cuff was deflated using spring loaded “shoehorn” deflation tool. In the second attempt, PLMA was successfully reinserted using the same technique. Rest of the surgery and anesthesia was uneventful.

We realized that the difficult insertion of PLMA during the first attempt was due to the partially inflated cuff. Although, during the first attempt, the cuff was fully deflated using the cuff deflation tool, the accidental opening of the red plug of the PLMA resulted in spontaneous inflation of the cuff partially [Figure 1]. Ensuring a fully deflated cuff reduces the risk of impaction, as the cuff is pressed away from the anterior pharyngeal structures and presents a fine leading edge for insertion especially in obese patients with restricted mouth opening. In the present case, though no complication occurred, but prolonged apnea due to failed insertion may lead to desaturation and other serious complications.

According to manufacture, the red plug of PLMA helps to prevent the build up of high intra cuff pressures during autoclaving in the event of incomplete evacuation. [1] Previous report of damage to PLMA cuff during autoclaving due to occluded red plug has also been described. The authors reported damage of PLMA during the first autoclaving before being used in the patient. [2] Initial PLMA were without red plug, and when compared with classic laryngeal mask airway (LMA), PLMAs have shorter life span. [3] The authors further stated that the life span of PLMA with and without plug was roughly same until 102 simulated autoclaving cycles. [3]

Classic, flexible and intubating LMA did not have red plug. It should be noted that apart from PLMA, no other supra glottic device has the red plug or similar concept for autoclaving. This difference in design of PLMA from other supra glottic devices lead to error by paramedical staff during autoclaving and tend to increase the total cost.

The limitations of the red plug and no increase in life span of PLMA with red plug raise the question of whether it should be present in the PLMA especially when it may lead to failed insertion due to accidental opening and partial inflation of cuff. The PLMA can be autoclaved in a manner similar to that of other supra glottic devices. We suggest the manufacturers should reasseass or redesign the red plug in PLMA. However opening of red plug and partial inflation of the cuff should not be missed as it takes a second to observe it and can prevent unnecessary delay in insertion of the device and desaturation. A check-list can also be made for LMA insertion.

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Letters to Editor

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