Restoration of 'red plug' to rescue a ProSeal® laryngeal mask airway

Sir,

Use of supraglottic airway devices has become an important part of anaesthesia practice since the introduction of classic laryngeal mask airway (cLMA®) by A. J. Brain in 1983. The induction of gastric channel into the basic design as in a ProSeal® laryngeal mask airway (PLMA®) proved to be a major advancement over cLMA® due to various reasons, the most important being the protection of lower airways from aspiration of gastric contents.[1] The reusable PLMA is made up of medical grade silicon that can be sterilized by autoclaving and manufacturers recommend it to be used not more than 40 times. However, there is supporting evidence that a PLMA can be used till it fails the pre-use check test rather than till it has been used a specific number of times.[2]

During one such pretest of a PLMA, we found the occluder of the red plug of a size 4 PLMA to be broken.

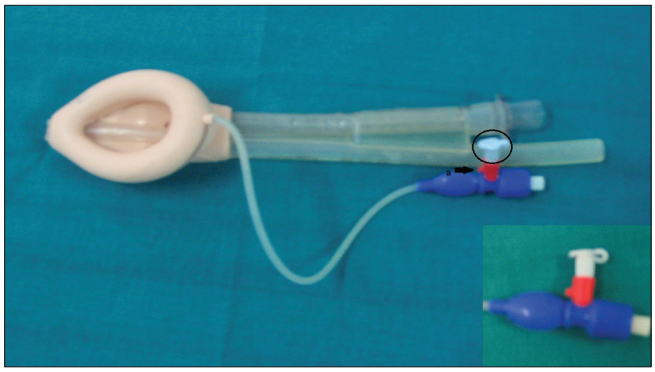

Figure 1: The 'repaired' ProSeal laryngeal mask airway. Arrow a shows the broken red plug without occluder and the cut end of nasogastric tube is encircled (inset showing the broken red plug repaired with cut end of a nasogastric tube)

The cuff, shaft, inflation line, and valve were all intact. Since the reusable PLMA is expensive, options to repair the red plug were sought. The plug at the proximal end of a paediatric size nasogastric tube (12 Fr Gauge) was cut and checked whether it fitted the red plug. It fitted over the red plug snugly and was secured using a water proof commercial adhesive ('Quickfix®') over the red plug [Figure 1]. Since this part of the PLMA remains outside the patient at all times, the risk of the new plug to break off inside the patient was not there. Further, the device cleared the pre-test including the inflation and deflation and has been used in patients without any failure due to the new 'red plug'.

There have been reports of damaged LMA devices where the one's with damage to cuff and shaft were disposed but the damages to inflation line and valve were repaired using different methods.[3,4] And our 'innovation' to repair the red plug is a further step to save an otherwise reusable device when resources are limited.

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Conflicts of interest

There are no conflicts of interest.

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