

Un-“Mask”-ing the leak

Dear Editor,

Mask ventilation is an essential skill that is necessary to be mastered during anesthesia residency, and it is important for a resident to know the various ways in which he/she can improve mask ventilation.^[1] An improper mask size, improper technique of mask-holding, or patient's facial features may contribute to difficult mask ventilation. An excessive leak (as manifested by an audible leak or inadequate filling of the bag) is often a sign of inadequate mask ventilation and can compromise oxygenation of the patient.

We report a case of air leak during bag-mask ventilation in the rural outreach center affiliated to our institute. The patient had no features of difficult mask ventilation. An appropriately sized anatomical face mask was used for bag-mask ventilation. Despite

a flow of 6 L/min and an appropriate technique of mask holding, the bag was filling inadequately. It got corrected with increasing the flow to 10 L/min. After intubation, no leak was noticed during ventilation. The machine check, prior to taking up the patient, showed no evidence of a leak. On closer inspection, the mask showed a cut between the apex and body of the mask [Figure 1].

Wear and tear after multiple usages might have contributed to the tearing of the mask at this junction. Also, a quick eye-balling method of inspection might have missed this torn area of the mask because of it being hidden under the retaining hook. Machine preuse check recommendations help rule out a leak in the breathing circuit.^[2] However, the mask and other airway devices, such as supraglottic devices and endotracheal tubes, are not checked during the machine leak test. At least one previous correspondence showcased the limitation of the preuse check by describing an unusual cause for leak, which was from a likely manufacturing defect in the endotracheal tube.^[3] This case reiterates that it is important to physically check all airway equipment prior to use.

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Conflicts of interest

There are no conflicts of interest.

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Figure 1: Mask showing tear at the junction of apex and body

References

1. Dorsch JA, Dorsch SE. Understanding Anesthesia Equipment. 5th ed. Philadelphia, PA: Lippincott Williams and Wilkins; 2008.
2. Recommendations for Pre-Anesthesia Checkout Procedures. Sub-committee of ASA committee on equipment and facilities, 2008. Available from: <http://www.asahq.org/For-Members/Clinical-Information/2008-ASA-Recommendations-for-PreAnesthesia-Checkout.aspx>. [Last accessed on 2019 May 21].
3. Singh PM, Kaur M, Rewari V. An unusual site of leak in anaesthesia circuit. *Anesth Essays Res* 2012;6:111.

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