Dear Editor,

An improvised head support to facilitate endotracheal intubation in the lateral position

Tracheal intubation is the most common method to secure an airway and is a routinely performed procedure for airway management during anesthesia. Conventional tracheal intubation is performed by placing the patient in the supine position with their head in the sniffing position.

Certain circumstances require an anesthesiologist to perform endotracheal intubation in positions other than supine like lateral. These situations include trauma, accidental airway loss during surgery, and inadequate regional anesthesia requiring conversion to general anesthesia in the lateral position. In addition, neoplastic conditions of the occiput, back, or the sacral region make it either impossible or very difficult to place the patient in the supine position for airway management. These issues are important because the consequences of inadequate airway management may be catastrophic, causing hypoxia, brain injury, and death.  

Endotracheal intubation using direct laryngoscopy in the lateral position may be an unfamiliar technique, typically cumbersome, and time consuming for many anesthesiologists. The laryngeal view is compromised during direct laryngoscopy and the anesthesiologist is in an uncomfortable position. The difficulty in performing laryngoscopy in patients lying in the right lateral position may be aggravated by the tongue, which has a tendency to slip off the laryngoscope blade due to gravity. In addition, limited space between the laryngoscope and the table top in the right lateral position may contribute to difficulty in insertion of the endotracheal tube from the right corner of the mouth.

Performing endotracheal intubation with the patient placed in the lateral position leads to decreased space for airway management and an assistant is required to support the occiput to prevent hyperextension of the cervical spine during mask ventilation, laryngoscopy, and intubation. In an attempt to overcome the aforementioned problems, we devised an indigenous assembly made from an L-shaped wooden rest (tube rest), which is used to hold the anesthesia circuit, in our institute to support the head and facilitate tracheal intubation in the lateral position (Fig. 1). The rigid vertical limb provided support to the occiput, preventing the head from falling back and hyperextension of the cervical spine and obviating the need for an assistant. Moreover, it made cricoid pressure more effective as this vertical limb resisted backward movement of the head and neck during the maneuver. Pillows made from layers of folded drape sheet were placed on the horizontal limb, the height of which was adjusted to keep the head in line with the torso to prevent anatomical distortion when the patient was placed in

Fig. 1. L-shaped wooden tube rest.

Fig. 2. Tube rest covered with drapes. (A) Vertical limb, (B) horizontal limb, (C) drape pillow on which the head was placed, and (D) line shows the step-ladder arrangement of the drapes.
the lateral position. These pillows were arranged in a step-ladder pattern (Fig. 2) to give extra space for airway management. This extra space was found to be especially beneficial for mask holding in the left lateral position while it also provided extra room for the introduction of the laryoscope and endotracheal tube in the right lateral position (Figs. 3–6). In addition, the height of the table was adjusted midway between the xiphisternum and suprasternal notch of the anesthesiologist, which was much higher than that recommended for conventional laryngoscopy, thereby avoiding an uncomfortable posture of the neck and allowing more in-line view of the laryngeal inlet while performing the procedure. Using the aforementioned method, we have improved not only the ease of mask ventilation and laryngoscopic performance but also the success of endotracheal intubation in both right and left lateral positions.

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References


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