

A Standard Reversed Y-Piece Technique for Fixation of the Laryngeal Mask Airway

Mohammad Dehghan-Tezerjani, Milad Minagar, Zahid Hussain Khan*

Department of Anesthesiology and Critical Care, Imam Khomeini Medical Complex, Tehran University of Medical Sciences, Tehran, Iran.

ARTICLE INFO

Article history:

Received 28 August 2019

Revised 19 September 2019

Accepted 03 October 2019

Keywords:

Laryngeal mask airway;

Y-piece;

Airway;

ABSTRACT

Airway management becomes a challenging task in subglottic stenosis due to noncompliant stricture. Location and extent of stricture also pose difficulty in securing front of neck access. management with use of available resources provides immediate lifesaving solution for anticipated or unanticipated life threatening conditions especially causing airway compromise.

© 2020 Tehran University of Medical Sciences. All rights reserved.

Securing the laryngeal mask airway (LMA) to the Y-piece and hence to the corrugated tubes and its inadvertent displacement because of its excursion in the mouth while being fixed or after being fixed has always been a problem since no guidelines or recommendations exist in this regard. Ever since the introduction of LMA, its fixation to the Y-piece has been attempted employing different techniques [1-2] but none are foolproof as the techniques have not been tested in randomized clinical trials. Since no guidelines existed in properly securing the LMA to the Y-piece, we conceived that a standard reversed Y-piece technique could solve the dilemma, and to achieve standardization, we placed both the inspiratory and expiratory limbs of the corrugated tubes around the neck but, a soft pad was placed between each of the limb and the neck (Figure 1), or else one of the corrugated tubes was fixed proximal to the Y-piece approximately 10 cm below the sternal notch with an adhesive tape (Figure 2). We prepare the Y-piece fixation as depicted in figure 2, but if surgical circumstances do not allow implementation of such a fixation, then we employ fixation of the Y-piece as appears in Fig. 1. Placement of adequate padding in this technique could obviate the possible side effects such as activation of the baroreceptor reflex frequently seen with carotid massage/pressure causing bradycardia [3] and raised intracranial pressure, or raised intraocular pressure

occurring when the corrugated tubes that are fixed round the neck cause inadvertent occlusion of the jugular veins.

Figure 1- Soft padding applied between the corrugated tubes and the neck.



The authors declare no conflicts of interest.

* Corresponding author.

E-mail address: khanzh51@yahoo.com

© 2020 Tehran University of Medical Sciences. All rights reserved.

Placement of the Y-piece in a reversed fashion as mentioned above imparts a pressure on the LMA thus preventing its inadvertent extrusion from the mouth. Moreover, it also helps in obviating an accidental disconnection of the corrugated tubes from the Y-piece, especially when unanticipated neck movements occur as a result of positioning of the patient by the surgeon.

Figure 2- Adhesive tape applied approximately 10 cm below the sternal notch for fixation of the corrugated tubes.



This standardized method proved highly effective in the fixation of LMA especially in orthopedic cases where

position variations are a common occurrence and frequently observed. Not only no untoward events were observed employing this technique with the LMA Classic™ (TELEFLEX headquarters international, IRELAND) in the supine position in our cases, but at the same time the frequently encountered aforementioned problems were altogether obviated. However, to arrive at concrete results, further studies employing this technique with different LMA types are recommended.

Consent

Written consent was obtained from the patients to use their photos for professional purposes.

References

- [1] Shokohi S, Aghdashi MM. A Simple and Effective Way to Secure a Laryngeal Mask Airway in Place. *A A Case Rep.* 2017; 9(12): 364.
- [2] Mireles R, Devgun R, Tucker B, Votta T, Chahal P, Ramsdell R, et al. A Novel Way to Secure the Laryngeal Mask Airway During Oral Surgery Procedures. *Anesth analg.* 2017; 124(6): 1836-8.
- [3] Pasquier M, Clair M, Pruvot E, Hugli O, Carron PN. Carotid Sinus Massage. *N Engl J Med.* 2017; 377: e21.