Bick E et al. *Anaesthesia*. 2014;69(12):1304-1308.
Editorial

Fewer sore throats and a better seal: why routine manometry for laryngeal mask airways must become the standard of care

Although the laryngeal mask is the airway of choice for many anesthesiologists and is considered easy to use, certain misconceptions regarding cuff pressure persist

Changes to the way in which laryngeal masks are used (e.g., routine use of manometry and the adoption of a safe maximum cuff pressure of 60 cm H_2O) would improve patient experience and safety

Introduction

- The laryngeal mask is the airway of choice for many anesthesiologists and is considered easy to use with a minimal capacity for airway morbidity
- Research suggests that many anesthesiologists do not use laryngeal masks optimally
  - There is evidence that the cuff is routinely over-inflated (to a pressure of >60 cm H_2O), resulting in impairment of the airway seal and injury to the patients' mucous membranes (resulting in post-operative sore throat)
- Data shows that anesthesiologists routinely do not check cuff pressure, and are generally unaware of correct inflation pressures and the capacity for potential harm in this setting

Misconceptions regarding the use of laryngeal masks

- Misconceptions regarding the use of laryngeal masks in terms of cuff volume and pressure persist and are addressed in Table 1

Table 1. Misconceptions regarding the use of laryngeal masks in terms of cuff volume and pressure

MISCONCEPTION	EXPLANATION
Recommended volumes for cuff inflation lead to the recommended cuff pressures	• The relationship between cuff volume and pressure is not straightforward • It is erroneously assumed that inflation with recommended volumes will result in the recommended pressures, but injecting the maximum recommended volume leads to a cuff pressure approximately twice the recommended maximum • The maximum recommended volume is not an indication of what is suitable for most patients, but reflects the volume to which the cuff can safely be distended without distorting or damaging the silicone/polyvinyl chloride (PVC) **Evidence clearly demonstrates that pressures >60 cm H_2O are harmful and worsen seal pressure**
Post-operative sore throats are infrequent and not related to cuff pressure	• The expected rate of sore throat in clinical practice (where cuff pressures often exceed 100 cm H_2O) is in the region of 40–50% • Data from randomized, controlled trials comparing high and low cuff pressures show that the rate of sore throat in low-pressure cuff groups is between one-third and one-half of that in high-pressure cuff groups **Sore throat is a significant concern to patients and is burdensome in terms of anesthetic morbidity**
Higher volumes and pressures may cause problems but at least you get a good seal	• If a laryngeal mask with a cuff pressure of 60 cm H_2O has a significant leak, the solution lies not with further inflation but with other aspects (e.g., depth of anesthesia, device repositioning or changing airway size/type) **Use of a manometer can exclude under- or overinflation as a cause for leaks**
Clinicians can judge cuff pressure by manual palpation of the pilot balloon	• Studies show that clinicians, irrespective of their experience, are poor at manually judging cuff pressures **Use of manometers at the point of laryngeal mask insertion can be used to train personnel to estimate cuff pressures through manual palpation of the pilot balloon**
The worst that can happen is a sore throat	• Significant morbidity may result from excessive cuff pressure, including recurrent laryngeal nerve palsy, dysphonia, dysphagia and venous congestion • Such morbidity may result from increased mucosal pressure and failure of the device to conform to the contours of the airway (i.e., the larynx, pharynx and esophagus) **Leakage of secretions or blood may occur if the seal is suboptimal, while high cuff pressures may increase the risk of regurgitation**

Conclusion

- Data suggests that, even after 30 years of use in clinical practice, there is a need to change the way in which laryngeal masks are used
- Suggestions include the routine use of manometry at the point of laryngeal mask insertion, the titration of laryngeal mask cuffs to achieve a 'just seal' pressure, and the adoption of a safe maximum cuff pressure (of 60 cm H_2O)
- The suggested changes could have a *"...widespread impact on patient experience and safety"*