Protection against aspiration of gastric contents: The laryngeal mask airway Proseal vs endotracheal tube

Sir,

We read with interest the article titled “The comparison of Proseal laryngeal mask airway and endotracheal tube in patients undergoing laparoscopic surgeries under general anaesthesia” by Saraswat and colleagues[1] in the March–April issue of IJA.

The primary variables studied were oxygenation and ventilation, based on which the power of the study was calculated to be 0.9. However, the predominant concern in the comparison of the two devices is the risk for aspiration of gastric contents. The reported incidence of clinically significant pulmonary aspiration in healthy patients undergoing elective surgery with the Laryngeal Mask Classic (LMA-C) is 1 in 5,000 to 1 in 12,000.[2,3] This is a similar order of magnitude to the incidence with endotracheal tube (ETT) or facemask in ASA I or II patients undergoing elective surgery.[4] Based on this incidence, to prove that the Proseal laryngeal mask airway (PLMA) is as good as the ETT to prevent aspiration and, keeping the power of the study to a minimum of 0.8 using the formula for equivalence trials with \( \alpha = 0.05 \), the total number of patients required to be included in the study are 5781 in each group.

Despite other reports of safe use of PLMA in large series,[2,5] there still is concern about the safety of this practice.[6] The present study is not adequately powered to conclude that the PLMA is a safe and
suitable alternative as compared with ETT where pulmonary aspiration of gastric contents is concerned.

Shivinder Singh, Ravindra Chaturvedi, R N Shukla, Ratnesh Shukla
Department of Anaesthesiology and Critical Care, Armed Forces Medical College, Pune, Maharashtra, India

Address for correspondence:
Dr. Shivinder Singh,
Department of Anaesthesiology and Critical Care,
Armed Forces Medical College, Sholapur Road,
Pune - 411 040, Maharashtra, India.
E-mail: sshivinder@hotmail.com

REFERENCES
1. Saraswat N, Kumar A, Mishra A, Gupta A, Saurabh G, Srivastava U. The comparison of Proseal laryngeal mask airway and endotracheal tube in patients undergoing laparoscopic surgeries under general anaesthesia. Indian J Anaesth 2011;55:129-34.
2. Verghese C, Brimacombe JR. Survey of laryngeal mask airway usage in 11,910 patients: Safety and efficacy for conventional and nonconventional usage. Anesth Analg 1996;82:129-33.
3. Brimacombe JR, Berry A. The incidence of aspiration associated with the laryngeal mask airway: A metaanalysis of published literature. J Clin Anesth 1995;7:297-305.
4. Warner MA, Warner ME, Weber JG. Clinical significance of pulmonary aspiration during the perioperative period. Anesthesiology 1993;78:56-62.
5. Sharma B, Sood J, Sahai C, Kumara V. Efficacy and safety performance of proseal laryngeal mask airway in laparoscopic surgery: Experience of 1000 cases. Indian J Anaesth 2008; 52:288-96.
6. Cooper RM. The LM, laparoscopic surgery and the obese patient-can vs should. Can J Anaesth 2003;50:5-10.

Access this article online

Quick response code

Website:
www.ijaweb.org

DOI:
10.4103/0019‑5049.89907