**ABSTRACTS**

**BACKGROUND AND OBJECTIVES:** Hemodynamic changes associated with direct laryngoscopy and endotracheal intubation is major problems in general anaesthesia. Supraglottic airway devices have been used as an alternative to tracheal intubation during general anaesthesia. Supraglottic airway device forms a low pressure seal around the laryngeal inlet and allows ventilation.

In view of this, the present study was undertaken to compare the performance of two supraglottic airway devices, I gel and proseal LMA in patients undergoing elective surgeries under general anesthesia.

**METHODOLOGY:** Seventy patients, scheduled for puerperal / laparoscopic sterilization under general anaesthesia belonging to ASA class I and II were included in the study and were randomly divided into two groups with 35 patients in each group. In Group A (n=35), I gel supraglottic airway device was used and in Group B (n=35) proseal laryngeal mask airway was used. Both the devices were compared in relation to the time taken for insertion of device, number of insertion attempts, airway sealing pressure, ease of gastric tube insertion, hemodynamic changes after insertion, intraoperative and postoperative complications.
RESULTS: The mean time taken for insertion of the device was lower in I gel group, compared to P-LMA, which was statistically significant (p value = 0.000). I gel was successfully inserted in 34 patients in first attempt, whereas P-LMA was successful in 31 patients in first attempt. But this difference was not statistically significant (p value = 0.356). The mean airway sealing pressure of I gel was 23.40 cmsH2O, which was smaller compared to mean airway sealing pressure of P-LMA which was 28.29 cmsH2O. This difference was statistically significant (p value = 0.000). Gastric tube insertion was successful in first attempt in 34 patients of both I gel and P-LMA groups. But this difference was not statistically significant (p value = 1.00). The mean heart rate was found to be statistically significant in baseline, 1 minute, 5 minutes, 10 minutes and 15 minutes after insertion of the device (p value < 0.05). We also found the changes in mean systolic blood pressure were not significant (p value > 0.05) in baseline, 1 minute, 5 minutes, 10 minutes and 15 minutes after insertion of the devices, but changes in mean diastolic blood pressure were significant (p < 0.05) at 1 minute, 5 minutes, 10 minutes and 15 minutes after insertion of the device except for mean diastolic blood pressure at baseline, where it was not significant (p value > 0.05). We also found the changes in mean arterial blood pressure were not significant (p value > 0.05) in baseline, 1 minute and 5 minutes after insertion of the devices, but changes in mean systolic pressure were significant (p value < 0.05) at 10 minutes and 15 minutes after insertion of the device. Also there was no change in oxygen saturation in both the groups from baseline till 15 minutes after insertion.
of the device. Though hemodynamic changes with respect to heart rate, arterial pressures and oxygen saturation were statistically significant, the changes in absolute values in hemodynamics between these two groups were not clinically significant. During insertion of the device, pressor response may be produced by passage of the device through oral and pharyngeal spaces and the pressure produced by the device in pharyngeal and laryngeal spaces. In our study, no incidence of complications like post extubation cough, laryngospasm, nausea / vomiting, trauma to lip / teeth / pharynx was noted. Post operative sore throat was noted in 2.9% of patients in I gel group, whereas sore throat was noted in 5.7% of patients in P-LMA group. Since the p value was 1.000, this difference was found to be not significant statistically.

**INTERPRETATION AND CONCLUSION:** From this study we conclude that both I gel and proseal LMA are safe and effective supraglottic airway devices, whereas I gel is relatively easier and faster to insert with lesser hemodynamic changes compared to proseal LMA. Insertion is smooth without any trauma to anatomical structures in both I gel and proseal LMA. Though I gel produces lesser airway sealing pressure compared to proseal LMA, still I gel is safer alternate airway device in positive pressure ventilation. The gastric access is easy and atraumatic, with majority being inserted in the first attempt. Patients in both the groups were relatively free of post extubation cough, laryngospasm, nausea
and vomiting and postoperative sore throat. Both I gel and proseal LMA are safe and patient friendly tools in the hands of Anaesthetists for surgeries under general anaesthesia with positive pressure ventilation, but I gel is superior in terms of ease of insertion and airway sealing pressure compared to proseal LMA.

**KEYWORDS:** supraglottic airway device, I gel, proseal LMA,