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COMPARATIVE STUDY BETWEEN I-GEL, A NEW SUPRAGLOTTIC AIRWAY DEVICE, AND CLASSICAL LARYNGEAL MASK AIRWAY IN ANAESTHETIZED SPONTANEOUSLY VENTILATED PATIENTS

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ABSTRACT **BACKGROUND:** Proper airway management is the most important task for an anaesthesiologist during general anaesthesia. The major role of anaesthesiologist is to provide adequate ventilation and oxygenation to the patient. The cLMA is designed for repeated use. The manufacturers guarantee it will perform well up to 40 times based on research showing alterations in the characteristics of the silicone used in its construction. The i-gel is a truly anatomical device, achieving a mirrored impression of the pharyngeal, laryngeal and perilaryngeal structures, without causing compression or displacement trauma to the tissues and structures in the vicinity. **MATERIAL AND METHODS:** This study was prospective randomized comparative single centre study done from June 2016 to May 2018 i.e.2 years in Vaishampayan Memorial Government medical college, Solapur, Maharashtra on Sixty patients. **RESULTS:** Mean age group of IGEL is 30.40 and cLMA is 31.10 respectively & in I-GEL group 16 males and 14 females. In cLMA group is 12 males and 18 females. By using IGEL 27 (90%) of cases were inserted easily and by using cLMA 25 (83.3%) of cases were inserted easily by using IGEL 93.3% of cases were done in first attempt and by using cLMA 83.3% of cases were done in first attempt. **Conclusion:** With the above study I –GEL was better in view of ease of insertion and placement was rapid than cLMA. Both cLMA and I-gel do not cause any significant alteration in the hemodynamic status of the patient SP02, BP and heart rate.

KEYWORDS : c-LMA, I-Gel, ventilation, insertion

INTRODUCTION:

Proper airway management is the most important task for an anaesthesiologist during general anaesthesia. The major role of anaesthesiologist is to provide adequate ventilation and oxygenation to the patient. Endotracheal intubation is the gold standard for airway management; however, this maneuver requires expertise and lots of clinical experience[1]. Laryngoscopy and endotracheal intubation trigger the sympathetic reflex response by increasing the plasma level of catecholamines, and cause hypertension, tachycardia, myocardial infarction, decreased myocardial contractility, and ventricular arrhythmia, all of which can be life threatening and to avoid this stress response and whenever intubation is difficult, insertion of supraglottic device needed to maintain oxygenation and ventilation of patient. Before 1990, only the facemask and the endotracheal tube (ETT) were the available airway devices. Since then several supraglottic airway devices has been developed, of which the laryngeal mask airway (LMA) is the most popular one[2]. Attempts to prevent complications and difficulties related to endotracheal intubation and laryngoscopy led to the introduction of new airway devices, namely, laryngeal mask airway (LMA) and I-Gel[2].

The Classic Laryngeal Mask Airway (cLMA), the cLMA was developed by Dr Archie Brain from 1981-1988 and released in 1988. During development over 100 prototypes were tested in more than 6000 patients. Its introduction was revolutionary: despite considerable scepticism at the time of its introduction, within a year every single hospital in the United Kingdom had purchased the cLMA[3].

The cLMA is designed for repeated use. The manufacturers guarantee it will perform well up to 40 times based on research showing alterations in the characteristics of the silicone used in its construction. However some hospitals use the cLMA for up to 100 uses without problem, although the manufacturers do not support this practice[3].

The i-gel is a truly anatomical device, achieving a mirrored impression of the pharyngeal, laryngeal and perilaryngeal structures, without causing compression or displacement trauma to the tissues and structures in the vicinity. The i-gel has evolved as a device that accurately positions itself over the laryngeal framework providing a reliable perilaryngeal seal and therefore no cuff inflation is necessary4. A supraglottic airway without an inflatable cuff has several potential advantages including easier insertion, minimal risk of tissue compression and stability after insertion (i.e. no position change with cuff inflation). The i-gel is designed as a latex free, sterile, single patient use device. Its recognized complications include laryngeal spasm, laryngeal trauma, sore throat, regurgitation of stomach contents, vomiting, neural injury, vocal cord paralysis, trauma to the tongue or sublingual nerves, and dysesthesia or cyanosis of the tongue[4]. In this randomised cross-over study, we compared the i-gel supraglottic airway and cLMA with respect to first time and overall success rate of insertion, ease of insertion and in regard of haemodynamic stability, complication if any.

Objectives:

To study success at first attempt of i-gel, success at first attempt of classical laryngeal mask airway, compare ease of insertion of i-gel and classical LMA & compare i-gel and classical LMA in regard of hemodynamic stability, complications if any.

Material And Methods:

This study was prospective randomized comparative single centre study done from June 2016 to May 2018 i.e.2 years in **Vaishampayan Memorial Government medical college, Solapur, Maharashtra on** Sixty patients. **Inclusion criteria:** Patient underwent elective surgeries where spontaneous ventilation is ideal, Age 16-60 yrs. of both sexes, ASA physical status I & II, Undergoing elective surgery lasting maximum 2 hours under general anaesthesia excluding oral surgery.

Exclusion Criteria:

ASA physical status III & IV, emergency surgeries, patients at specific risk of aspiration and anticipated difficult airway, predicted difficult airway (such as mouth opening < 2 cm, modified mallampatti scale class 3 and 4, BMI >35 kg/m^{2}, history of allergy to latex, mouth opening < 2.5 cm, patient with abnormal PFT, head injury, upper respiratory tract pathology of oropharynx and larynx, gastro-esophageal reflux disease, hiatus hernia & pregnancy. **Study Procedure:** After taking permission from ethics committee and getting written informed consent from patients, the patients was allotted randomly into two groups of 30 patients. One group was received classical LMA and another group was received I Gel.

Anaesthesia Protocol:

A thorough pre anaesthetic evaluation was done history &

general examination. All patients were kept nil per oral before surgery according to standard protocol. Patients shifted to OT, an IV line was secured with 18g venous cannula, and an infusion of ringer lactate solution was started. The patients connected to the monitor and the pre induction systolic BP, diastolic BP, MAP, heart rate, SPO2 are recorded. Patient was pre-medicated with Injection Glycopyrolate 0.004mg/kg, injection ranitidine 1mg/kg, Injection Midazolam 0.03mg/kg. IV, inj. ondansetron 0.08mg/kg IV, injection pentazocine 0.3mg/kg will be given as pre medication. Preoxygenation with 100 % O2 for 3 min. All the patients were induced on inj. Propofol 2mg/kg and sevoflurane up to 4% without any muscle relaxant. After an adequate depth of anaesthesia is achieved, classical LMA or I Gel of appropriate size according to weight is inserted and connected to the anaesthetic machine after confirming correct placement. Patient will be maintained on oxygen 50%: nitrous oxide 50%, isoflurane 0.2 to 2% and propofol 50 to 100 microgram per kg per minute iv. If the device insertion is not achieved, 2 extra attempts of placing should try. If placements are unsuccessful after 3 attempts, the procedure was discarded and the airway will be secured through other airway device as appropriate and this case will be considered as a failed attempt. The classical LMA was inserted and the cuff was inflated with intra cuff pressure around 60 cms H2O. Ventilation was judged to be optimal with sufficient chest rise, constant oxygenation SPO2 greater than 90% and absence of leak. I – GEL was inserted in sniffing position. Ventilation was judged to be optimal with sufficient chest rise, adequate SPO2 greater than 90%, absence of leak and bilateral air entry equal on both side of chest on auscultation.

All patients monitored continuously. At the end of procedures, anaesthetic agents was discontinued; the classical LMA (or) I Gel was removed once the patient fully awake. Patient was monitored for 30 minutes. The patient shifted to postoperative ward after full recovery.

Parameter evaluated:
All patients was monitored continuously for Heart rate – during insertion, intraoperative, during removal and after removal, SBP, DBP, MAP – during insertion, intraoperative, during removal and after removal, SPO2- during insertion, intraoperative, during removal and after removal & to compare cLMA and I-gel for ease of insertion, duration of attempts and number of attempts.

Figure 1: CLMA insertion during surgery

Figure 2: I – GEL insertion during surgery

RESULTS:
Prospective randomized comparative single centre study done from June 2016 to May 2018 i.e.2 years in **Vaishampayan Memorial Government medical college, Solapur,** **Maharashtra on** Sixty patients. The patients was allotted randomly into two groups of 30 patients. One group was received classical LMA and another group was received I Gel.

Table 1: Age distribution in both groups

Group	N	Mean ± SD	P Value
IGEL	30	30.40±9.1	0.757
cLMA	30	31.10±8.8	Not significant

Table 1 shows that the mean age group of IGEL is 30.40 and cLMA is 31.10 respectively and was not statistically significant (p>0.05).

Table 2: Demographic details – Gender M/F in both groups.

Group	Male	Female
I- GEL	16 (53.3%)	14 (46.6%)
cLMA	12 (40%)	18 (60%)

Table 2 shows in I-GEL group 16 males and 14 females. In cLMA group is 12 males and 18 females.

Table 3: Ease of Insertion in both groups

Group	Easy	Difficult	P Value
IGEL	27(90.0%)	3(10%)	0.02
cLMA	25(83.3%)	5(16.7%)	significant

Table 3 shows that by using IGEL 27 (90%) of cases were inserted easily and by using cLMA 25 (83.3%) of cases were inserted easily. Association of IGEL and cLMA with ease of insertion was done using CHI-SQUARE and was statistically significant (p<0.05).

Table 4: No of Attempts in both groups

Group	1 attempt	2 attempt	P Value
IGEL	28(93.3%)	2(6.7%)	0.228
cLMA	25(83.3%)	5(16.7%)	Not significant

Table 4 shows that by using IGEL 93.3% of cases were done in first attempt and by using cLMA 83.3% of cases were done in first attempt. Association of IGEL and cLMA with number of attempts was done using CHI-SQUARE and was not statistically significant (p>0.05).

Table 5: Duration of Attempts in both groups.

Group	N	Mean ± SD	P Value
IGEL	30	14.57±2.1	0.003
cLMA	30	24.97±4.2	significant

Table 5 shows that the mean duration of attempts in IGEL is 14.57 and cLMA is 24.97 respectively and was statistically significant (p<0.05).

Table 6: Complications in both groups

Complications	IGEL		cLMA		p value
	Yes	No	Yes	No	
Sore throat	1 (3.3%)	29 (96.7%)	4 (13.3%)	26 (86.7%)	0.161 Not significant
Bronchospasm	0	30 (100%)	0	30 (100%)	30 (100%)
Laryngospasm	0	30 (100%)	0	30 (100%)	30 (100%)
Traumatic injury	0	30 (100%)	0	30 (100%)	30 (100%)
Hoarseness of voice	0	30 (100%)	0	30 (100%)	30 (100%)

Table 6 shows that by using I-GEL 3.3% of cases had complication of sore throat and by using cLMA there is 13.3% of cases had complication of sore throat. Association of IGEL and cLMA with complication following surgery was done using CHI-SQUARE and was statistically not significant (p<0.05).

Table 7: Distribution Heart Rate in both groups

Heart rate	Group	N	Mean ± SD	P Value
Baseline	IGEL	30	81.00±10.4	0.550
	cLMA	30	84.70±10.8	Not significant
Post 1 minute	IGEL	30	86.43±11.4	0.841
	cLMA	30	90.33±10.6	Not significant
Post 10 minute	IGEL	30	83.22±10.0	0.205
	cLMA	30	86.56±10.2	Not significant
Post 20 minute	IGEL	30	81.91±08.4	0.099
	cLMA	30	85.56±08.5	Not significant
Post 30 minute	IGEL	30	79.63±09.8	0.233
	cLMA	30	82.63±09.5	Not significant
Device removal	IGEL	30	91.73±11.2	0.764
	cLMA	30	94.77±11.4	Not significant
Post 10 minute	IGEL	30	88.41±10.1	0.473
	cLMA	30	86.53±10.3	Not significant
Post 20 minute	IGEL	30	83.00±09.5	0.190
	cLMA	30	86.11±08.6	Not significant
Post 30 minute	IGEL	30	81.62±09.9	0.595
	cLMA	30	80.33±08.9	Not significant

Table 7 shows that the mean Heart rate of IGEL during baseline, post 1 minute, post 10 minute, post 20 minute, post 30 minute, device removal, device removal post 10 minute, device removal post 20 minute and device removal post 30 minute are 81.0,86.43,83.22,81.91,79.63,91.73,88.41,83.00 and 81.62 respectively and the same for cLMA are 84. 70, 90. 33, 86. 56, 85.56,82.63,94.77,86.53,86.11 and 80.33 respectively and these results were statistically not significant (p>0.05).

Table 8: Systolic Blood Pressure in both groups

Systolic BP	Group	N	Mean±SD	P Value
Baseline	IGEL	30	117.13±8.6	0.707
	cLMA	30	117.73±8.7	Not significant
Post 1 minute	IGEL	30	123.33±9.3	0.101
	cLMA	30	124.17±6.4	Not significant
Post 10 minute	IGEL	30	126.73±6.7	0.081
	cLMA	30	127.57±4.0	Not significant
Post 20 minute	IGEL	30	124.61±5.8	0.332
	cLMA	30	125.90±4.4	Not significant
Post 30 minute	IGEL	30	122.70±4.5	0.192
	cLMA	30	124.20±4.3	Not significant
Device removal	IGEL	30	131.97±6.0	0.751
	cLMA	30	132.30±4.1	Not significant
Post 10 minute	IGEL	30	124.33±5.9	0.200
	cLMA	30	126.03±4.1	Not significant
Post 20 minute	IGEL	30	122.16±5.2	0.087
	cLMA	30	124.30±4.3	Not significant
Post 30 minute	IGEL	30	120.46±4.7	0.0001
	cLMA	30	123.03±4.6	significant

Table 8 shows that the mean systolic blood pressure of I-GEL during baseline, post 1 minute, post 10 minute, post 20 minute, post 30 minute, device removal, device removal post 10 minute, device removal post 20 minute and device removal post 30 minute was 117. 13, 123. 33, 126. 73, 124. 61, 122. 70, 131.97,124.33,122.16 and 120.46 respectively and the same for cLMA was117.73,124.17,127.57,125. 90, 124. 20, 132. 30, 126. 03,124.30 and 123.03 respectively and results mostly were statistically not significant (p<0.05).

Table 9: Diastolic Blood Pressure in both groups

Diastolic BP	Group	N	Mean ± SD	P Value
Baseline	IGEL	30	78.87±6.4	0.305
	cLMA	30	76.43±5.2	Not significant
Post 1 minute	IGEL	30	82.53±7.7	0.064
	cLMA	30	81.02±5.1	Not significant
Post 10 minute	IGEL	30	80.07±8.6	0.074
	cLMA	30	82.77±4.2	Not significant
Post 20 minute	IGEL	30	79.10±6.8	0.372
	cLMA	30	80.60±6.1	Not significant
Post 30 minute	IGEL	30	78.00±6.7	0.471
	cLMA	30	79.20±6.1	Not significant
Device removal	IGEL	30	83.60±8.3	0.072
	cLMA	30	86.93±5.9	Not significant
Post 10 minute	IGEL	30	80.80±7.9	0.048
	cLMA	30	84.30±5.3	significant
Post 20 minute	IGEL	30	78.96±6.1	0.007
	cLMA	30	82.96±5.1	significant
Post 30 minute	IGEL	30	77.50±5.6	0.012
	cLMA	30	81.00±4.9	significant

Table 9 shows that the mean diastolic blood pressure of I-GEL during baseline, post 1 minute, post 10 minute, post 20 minute, post 30 minute, device removal, device removal post 10 minute, device removal post 20 minute and device removal post 30 minute are 78.87, 82.53, 80.07, 79.10, 78.00, 83.60, 80.80, 78.96 and 77.80 respectively and the same for cLMA are 76.43, 81.02, 82.77, 80.60, 79.20, 86.93, 84.30, 82.96 and 81.00 respectively and results mostly were statistically not significant (p<0.05).

Table 10: Mean blood pressure in both groups

MAP	Group	N	Mean ± SD	P Value
Baseline	IGEL	30	91.47±5.8	0.180
	cLMA	30	90.17±4.6	Not significant
Post 1 minute	IGEL	30	95.87±7.6	0.078
	cLMA	30	97.03±3.8	Not significant
Post 10 minute	IGEL	30	95.23±6.8	0.083
	cLMA	30	96.40±3.3	Not significant
Post 20 minute	IGEL	30	92.80±5.7	0.228
	cLMA	30	94.40±4.4	Not significant
Post 30 minute	IGEL	30	91.06±6.7	0.458
	cLMA	30	92.26±5.7	Not significant
Device removal	IGEL	30	99.43±6.5	0.121
	cLMA	30	102.10±4.2	Not significant
Post 10 minute	IGEL	30	94.36±6.9	0.075
	cLMA	30	97.73±7.5	Not significant
Post 20 minute	IGEL	30	92.20±6.6	0.212
	cLMA	30	94.66±8.4	Not significant
Post 30 minute	IGEL	30	89.86±6.5	0.133
	cLMA	30	92.60±7.4	Not significant

Table 10 shows that the mean blood pressure of IGEL during baseline, post 1 minute, post 10 minute, post 20 minute, post 30 minute, device removal, device removal post 10 minute, device removal post 20 minute and device removal post 30 minute were 91.47, 95.87, 95.23, 92.80, 91.06, 99.43, 94.36, 92.20 and 89.86 respectively and the same for cLMA are 90.17, 97.03, 96.40, 94.90, 92.26, 102.10, 97.10, 97.73, 94.66 and 92.60 respectively and results mostly were statistically not significant (p<0.05).

Table 11: SPO2 in both groups

SPO2	Group	N	Mean ± SD	P Value
Baseline	IGEL	30	98.36±0.85	0.745
	cLMA	30	98.43±0.81	Not significant
Post 1 minute	IGEL	30	98.45±0.82	0.963
	cLMA	30	98.46±0.86	Not significant
Post 10 minute	IGEL	30	98.63±0.80	0.882
	cLMA	30	98.60±0.77	Not significant
Post 20 minute	IGEL	30	98.80±0.80	0.775
	cLMA	30	98.86±0.82	Not significant
Post 30 minute	IGEL	30	99.00±0.78	0.634
	cLMA	30	98.90±0.84	Not significant
Device removal	IGEL	30	98.73±0.83	0.888
	cLMA	30	98.76±0.82	Not significant
Post 10 minute	IGEL	30	98.80±0.88	0.646
	cLMA	30	98.90±0.80	Not significant
Post 20 minute	IGEL	30	99.00±0.87	0.857
	cLMA	30	98.96±0.85	Not significant
Post 30 minute	IGEL	30	99.06±0.87	0.853
	cLMA	30	99.10±0.80	Not significant

Table 11 shows that the mean SPO2 of I-GEL during baseline, post 1 minute, post 10 minute, post 20 minute, post 30 minute, device removal, device removal post 10 minute, device removal post 20 minute and device removal post 30 minute are 98.36, 98.46, 98.63, 98.80, 99.00, 98.73, 98.80, 99.00 and 99.06 respectively and the same for cLMA are 98.43, 98.46, 98.60, 98.86, 98.90, 98.76, 98.90, 98.96 and 99.10 respectively and results mostly were statistically not significant (p<0.05).

DISCUSSION:

Present study shows that the mean age group of I-Gel is 30.40 and cLMA is 31.10 respectively and is not statistically significant (p>0.05). Similar to present study Pournajafian A et al[1] (2015) A total of 61 subjects were evaluated including 31 patients (50.8%) in the LMA and 30 (49.2%) in the I-Gel groups. Among demographic variables, sex (P = 0.001) and weight (P = 0.006). Mean age of igel group is 40.73 and that of cLMA group is 42.61 years. Similarly, Rao G.S et al[2](2016) The mean age in group I-Gel and cLMA is 34.0±8.68 and 34.0±8.27 years respectively. There was no significant difference in the age of the patients between Group I-Gel and Group cLMA (p=0.84). Alex .S et al[10] (2017) 100 adult patients who underwent elective ENT procedures under general anesthesia with spontaneous ventilation were randomly assigned into two groups: I-gel and LMA groups by draw method. The mean age in group I-Gel and cLMA were 28.29±10.4 and 31.62±11.4 years respectively.

Present study shows in I-GEL group 16 males and 14 females. In cLMA group is 12 males and 18 females. Pournajafian A et al[1] (2015) study shows that I-GEL group 7 males and 23 females. In cLMA group is 21 males and 10 females. Rao G.S et al[2] (2016) study shows that I-GEL group 26 males and 24 females. In cLMA group is 25 males and 25 females. Alex .S et al[10] (2017) study shows that I-GEL group 26 males and 24 females. In cLMA group is 25 males and 25 females. Venkateshwarlu G et al[11] (2017) study shows that I-GEL group 26 males and 24 females. In cLMA group is 28 males and 22 females.

Present study shows that by using I-GEL 27 (90%) of cases were inserted easily and by using cLMA 25 (83.3%) of cases were inserted easily. Association of I-GEL and cLMA with ease of insertion was done using CHI-SQUARE and is statistically significant (p<0.05). Similar to present study Rao G.S et al[2] (2016) study shows that the ease of insertion was not statistically significant between the two groups (p=0.079). This is easy in 48 cases out of 50 in case of I-GEL and easy in 45 cases out of 50 in case of cLMA. Janakiraman.C et al[14] (2009) study In a randomised cross-over study, we compared the performance of the single use i-gel supraglottic airway and reusable classic laryngeal mask airway (cLMA) in 50 healthy anaesthetised patients who were breathing spontaneously. Insertion was scored as easy in 40 cases (80%) with i-gel and 45 cases (90%) with cLMA.

Present study shows that by using IGEL 93.3% of cases were done in first attempt and by using cLMA 83.3% of cases were done in first attempt. Association of IGEL and cLMA with number of attempts was done using CHI-SQUARE and is not statistically significant (p>0.05). In contrast to present study Pournajafian A et al[1] (2015) study shows that The difference between the two groups in regards of insertion time and I-Gel attempts were not significant. Success rate in first attempt in case of cLMA is 80.6% and that of I-gel it is 66.7%. Similar to present study Rao G.S et al[2] (2016) study shows that 49 of 50 (98%) insertions in group I-gel were in the first attempt and only 1 patient required 2nd attempt. 45 of 50 (90%) in the group cLMA required only one attempt and 5 patients required 2nd attempt. In second attempt for insertion, airway manipulation with jaw thrust was required in both the groups. Alex .S et al[10] (2017) study shows that 48 of 50 (96%) insertions in group I-gel were in the first attempt and only 2 patient required 2nd attempt. 40 of 50 (80%) in the group cLMA required only one attempt and 10 patients required 2nd attempt. Helmy A.M et al[13] (2013) study shows that 36 of 40 (90%) insertions in group I-gel were in the first attempt and only 4 patient required 2nd attempt. 32 of 40 (80%) in the group cLMA required only one attempt and 8 patients required 2nd attempt.

Present study shows that the mean duration of attempts in IGEL is 14.57 and c-LMA is 24.97 respectively and is statistically significant (p<0.05). Similar to present study Rao G.S et al[2] (2016) study shows that the mean duration of insertion of i-gel in group I patients and c-LMA in group L patients was statistically highly significant. (p<0.001). This is 17.26±2.93 seconds for i-gel and 24.9±4.82 for c-LMA. Alex .S et al[10] (2017) study shows that mean duration of insertion in case of i-gel is 13.6 ± 3.9 and for c-LMA is 23.2 ± 7.9 seconds. Helmy A.M et al[13] (2013) study shows that duration of insertion in case of i-gel is 15.62±4.9 and for c-LMA is 26.2±17.7 seconds.

Present study shows that by using IGEL 3.3% of cases had complication of sore throat and by using c-LMA there is 13.3% of cases had complication of sore throat. Association of IGEL and cLMA with complication following surgery was done using CHI-SQUARE and is statistically not significant (p<0.05). Similar to present study Rao G.S et al[2] (2016) study shows that Lip injury was noted in 3 patients in group I (I-gel) out of 50 and in 5 patients out of 50 in group L(c-LMA). However the incidence was not statistically significant (p=0.461) when compared between both the groups. The incidence was not statistically different (p=0.400) when compared between the groups. The sore throat in all the 6 cases was mild requiring no treatment. None of the patients in both the groups developed post operative hoarseness or dysphagia.

Similar to present study Rao G.S et al[2] (2016) study shows that The basal heart rate was comparable in both groups (p=0.964). Statistical evaluation between the groups showed no significant difference in HR changes between group I and group L during the insertion of i-gel or c-LMA respectively and also after 1 min, 3 min and 5 min after insertion. Rajendran A. et al[17] (2018) study shows that Comparison of pre insertion, 1 min post insertion, 5 min post insertion Heart rate, Systolic Blood Pressure and Diastolic blood pressure in classic LMA and i- gel cases had not showed any important difference statistically. All the above mentioned parameters (HR, SBP, and DBP) were found to have marginal peak effect at 1 min post insertion in both the groups. Similar to present study Rao G.S et al[2] (2016) study shows that The mean basal DBP were comparable in both groups (p=0.935). The mean DBP changes at the time of insertion of the device were not statistically significant. Statistical evaluation between the groups showed no significant difference in DBP changes between group I and group L during 1 min, 3 min and 5 mins after insertion. There was also no significant changes in DBP during removal and 1 min after removal of the devices between the groups.

Similar to present study Helmy AM et al[18] (2010), In conclusion, both LMA and I-gel do not cause any significant alteration in the SPO2. Similar to present study Sarika AS et al[19] (2017), No significant difference was seen statistically (p>0.05) between the two groups in terms of partial oxygen saturation (SpO2).

CONCLUSION:

The study was conducted to evaluate the clinical utilization of the two airway device cLMA and I– GEL in elective surgical procedures. With the above study I –GEL was better in view of ease of insertion and placement was rapid than cLMA. Both cLMA and I-gel do not cause any significant alteration in the hemodynamic status of the patient SP02, BP and heart rate. Complications are comparable in both groups but cLMA were found greater chances of sore throat than I-gel. So from present study it was concluded that I-gel is superior than cLMA in supraglottic devices.

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