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Original Article

Anaesthesia Section

Clinical Performance of I-gel versus Ambu AuraGain in Paediatric Patients undergoing General Anaesthesia: A Randomised Clinical Study

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ABSTRACT

Introduction: Newer second-generation Supraglottic Airway Devices (SADs) are easy to insert and provide a smooth induction of anaesthesia with minimal haemodynamic pressor response. The paediatric I-gel and Ambu AuraGain are newer SADs that are increasingly being used as alternatives to endotracheal intubation in the paediatric population.

Aim: To compare the clinical performance of I-gel and Ambu AuraGain in children undergoing general anaesthesia with respect to ease of insertion, haemodynamic changes, and the frequency and severity of postoperative sore throat.

Materials and Methods: This randomised clinical study included 100 children aged 2 to 10 years, belonging to American Society of Anaesthesiologists (ASA) Grade I and II, scheduled for elective surgery under general anaesthesia. They were randomly allocated to Group I (I-gel) and Group A (Ambu AuraGain), comprising 50 patients each. The time taken for SAD placement, the number of attempts, ease of insertion, and the requirement of additional airway manipulations during insertion were observed. Haemodynamic Parameters Heart Rate (HR), Systolic Blood Pressure (SBP), Diastolic Blood Pressure (DBP), Mean Arterial Pressure (MAP), SpO_2, and End-tidal Carbon Dioxide ($EtCO_2$) during the procedure were observed. The frequency and severity of postoperative sore throat were assessed between both groups. Descriptive statistics were applied to all data and reported in terms of mean, Standard Deviation (SD), and percentages, and appropriate statistical tests of comparison were applied.

Results: In this study, the demographic data of patients, such as age, weight, gender, and ASA status, were comparable in both groups. There was no statistically significant difference in the time taken for successful SAD placement and the number of attempts required to do the same. Ambu AuraGain was easier to insert than I-gel (p-value <0.05). I-gel required a significantly higher number of additional airway manipulations during insertion compared to Ambu AuraGain (20% in Group I versus 4% in Group A). Haemodynamic parameters were comparable between both groups at all time intervals. The frequency and severity of postoperative sore throat were statistically non significant between I-gel and Ambu AuraGain.

Conclusion: Both the I-gel and Ambu AuraGain are reliable and safe devices for maintaining an adequate airway in paediatric patients. However, Ambu AuraGain was easier to insert and required fewer airway manipulations than I-gel during insertion, making it a favourable choice.

Keywords: Airway, Laryngoscopy, Supraglottic airway device

INTRODUCTION

Securing an airway is a pivotal role of an anaesthetist in both elective and emergency surgeries [1]. Airway management in children becomes more important and difficult owing to their anatomical (omega-shaped epiglottis, anteriorly placed larynx) and physiological (higher oxygen requirement and low functional residual capacity) differences [2]. In general anaesthesia, direct laryngoscopy and intubation via Endotracheal Tube (ETT) are most commonly used for airway management. However, due to their traumatic complications as well as their increase in pressor response, they are viewed as one of the most invasive stimuli in anaesthesiology [3].

Postoperative sore throat is a very frequently encountered problem in patients who undergo surgery with general anaesthesia using traditional laryngoscopy. According to the Royal College of Anaesthetists, the occurrence of sore throat after general anaesthesia in a child with good health undergoing a minor operation is very common, with a ratio of approximately one in ten children [4].

In 1981, Archie Brain invented the first SAD, the classic Laryngeal Mask Airway (cLMA) [5]. These devices fill the gap between a facemask and ETTs [6]. Newer or second-generation SADs have a provision for venting of regurgitant material by adding a gastric drain tube. These SADs aim to improve clinical performance by providing easy insertion and higher airway leak pressures [7]. It has been studied that insertion of the new SADs provides a smooth induction of anaesthesia with minimal haemodynamic pressor response [8]. All these features have made the second-generation SADs an attractive alternative to ETT for airway management in children.

I-gel belongs to the second generation of SADs and was developed by Intersurgical Ltd., Wokingham, Berkshire, UK. It is made up of medical-grade thermoplastic elastomer (Styrene ethylene butadiene styrene) which has a non nflatable cuff and is anatomically designed to fit the laryngeal inlet [9]. It has a semi-rigid stem and an integral rigid bite block which helps in easier insertion and decreases the chances of kinking [10].

Ambu AuraGain (Ambu, Ballerup, Denmark) is also a second-generation, relatively novel SAD which has been introduced recently [11]. It has a soft rounded tip and a thin and soft inflatable cuff which delivers higher seal pressures. It has a 90° angled airway tube which mirrors the natural curvature of the oropharyngeal cavity and is wide enough to act as a conduit for tracheal intubation with a standard-sized ETT [12].

A study comparing the clinical performance of Ambu AuraGain and I-gel in paediatric patients found that for efficient ventilation, fewer additional airway maneuvers were required for Ambu AuraGain

than for I-gel during placement [11]. Another study compared the severity and frequency of postoperative sore throat in children undergoing elective surgery after the insertion of Ambu LMA or I-gel and concluded that there was no statistically significant difference between the two groups [13].

After reviewing the literature, it was found that many investigators have studied the clinical performance of various SADs, including Ambu AuraGain and I-gel, for maintaining a secure airway in children [11,14,15]. However, limited literature was available with a head-on comparison between I-gel and Ambu AuraGain regarding ease of insertion, haemodynamic parameters, and especially postoperative sore throat in detail [13]. Hence, it was proposed to compare all these three variables between I-gel and Ambu AuraGain in paediatric patients scheduled for elective surgery under general anaesthesia.

MATERIALS AND METHODS

This randomised clinical study was conducted in 100 patients aged 2-10 years of either sex posted for elective surgeries belonging to ASA Grade I and II under general anaesthesia after obtaining approval from the Institutional Ethical Committee (IEC) (No. BFUHS/2K21p-TH/14754) from December 2021 to December 2022 at Rajindra Hospital in Patiala, Punjab, India. The primary outcome measures were ease of insertion, haemodynamic changes, and the frequency and severity of postoperative sore throat. The secondary outcome measure was the occurrence of other postoperative complications (laryngospasm, coughing, blood stain on SAD after removal, and trauma to the tongue, teeth, or lips). Written informed consent was obtained from the parents/legal guardian of the child.

Inclusion criteria: Patients aged 2-10 years of either sex belonging to ASA Grade I and II posted for elective surgeries under general anaesthesia lasting less than two hours were included in the study.

Exclusion criteria: Patients belonging to ASA Grade III and above, non fasting children, patients with pre-existing sore throat or symptoms of upper respiratory tract infection, refusal by the parents/legal guardian, anticipated difficult intubation, patients who are unable to self-report about the severity of sore throat, head and neck surgeries, and surgeries in the prone position were excluded from the study.

Sample size calculation: The two independent groups to be compared were of equal size 'n' and drawn from the population. From the pilot study conducted in this institute, the ease of insertion was observed, and the following values were obtained to calculate the sample size.

Alpha (level of significance)=0.05,

Respective tail areas under the standard normal curve.

$Z_{1-\alpha/2}$=1.96, $Z_{1-\beta}$=1.28155,

Power=1-β=0.90.

Sigma (common variance)=0.42.

Delta (difference between the two groups)=0.28

$$n=\frac{2\sigma^2(Z_{1-\alpha/2}+Z_{1-\beta})}{\Delta^2}$$ for each group

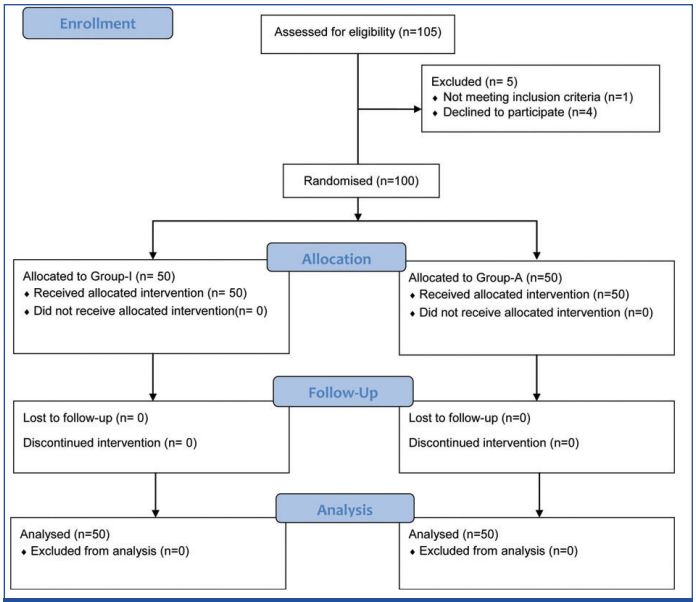
n=47.28~47

As n=47, a sample size of 50 was taken for each group to increase the power of the study.

One hundred patients were randomised into two groups, with 50 patients in each group based on computer-generated randomised tables [Table/Fig-1].

Group I: An appropriately sized I-gel (according to the weight of the child) was inserted.

Group A: An appropriately sized Ambu AuraGain (according to the weight of the child) was inserted.



[Table/Fig-1]: Consort flow diagram.

Procedure

A cannula of 20G to 24G size was inserted according to the age of the child to maintain intravenous access after the arrival of the patient in the preoperative room. Routine monitors, including pulse oximetry, non invasive blood pressure apparatus, end-tidal CO_2 monitor, and Electrocardiogram (ECG) leads, were applied to the patient in the operating theatre. Baseline values of Heart Rate (HR), Systolic Blood Pressure (SBP), Diastolic Blood Pressure (DBP), Mean Arterial Pressure (MAP), End-tidal CO_2 ($EtCO_2$), and Oxygen Saturation (SpO_2) were recorded.

The patient was preoxygenated with 100% oxygen using an antistatic face mask for five minutes. Induction of anaesthesia was done with Inj. Glycopyrrolate 4 mcg/kg, Inj. Fentanyl 1 mcg/kg, Inj. Propofol 1.5-2 mg/kg, and Inj. Succinylcholine 2 mg/kg. After the patient was fully relaxed, an appropriately sized SAD in accordance with the patient's weight was inserted using the standard technique. Correct placement of the SAD was ensured by adequate chest rise and sine wave capnography. The ease of insertion of the SAD was assessed using four grades: 1-no resistance; 2-mild resistance; 3-moderate resistance; and 4-inability to place the device [14].

The number of attempts, insertion time of the SAD (from the time of removal of the face mask to the moment stable capnography was traced on the monitor in the presence of sufficient ventilation) [11], and the requirement of additional airway manipulations during insertion were noted.

Anaesthesia was maintained with O_2, N_2O, and isoflurane. Inj. Atracurium was used as a muscle relaxant. Haemodynamic parameters (HR, SBP, DBP, MAP, SpO_2, and $EtCO_2$) were recorded immediately after the insertion of the SAD, at 1, 3, 5, 10, 15, 20 minutes, and at the time of removal of the SAD.

At the end of the procedure, a reversal agent containing Inj. Neostigmine 50 mcg/kg and Inj. Glycopyrrolate 10 mcg/kg was given. The patient was brought on spontaneous ventilation with adequate tidal volume, and the SAD was removed. The occurrence of postoperative complications such as laryngospasm, coughing, blood stain on the SAD after removal, and trauma to the tongue, teeth, or lips were recorded.

The presence and severity of postoperative sore throat were observed upon arrival in the recovery room, at 1 hour, 6 hours, and 24 hours postoperatively. The severity of sore throat was assessed using a 4-point categorical pain scale where 1-no sore throat, 2-mild (patient complains of sore throat only after asking), 3-moderate (patient complains of sore throat on his/her own), and

4-severe (patient has a change of voice or hoarseness associated with throat pain) [16].

STATISTICAL ANALYSIS

Descriptive statistics were applied to all the data and reported in terms of mean, Standard Deviation (SD), and percentages. The data were analysed using the Statistical Package for the Social Sciences (SPSS) version 22.0 and Microsoft Excel. Appropriate statistical tests of comparison were applied. Chi-square tests and Fisher-Exact tests were used for the analysis of categorical variables, while t-tests and Mann-Whitney U tests were used for continuous variables, where applicable. A p-value of <0.05 was considered statistically significant.

RESULTS

Demographic parameters: In this study, the demographic data of patient age, weight, gender, and ASA status were comparable in both groups, and no statistically significant difference was found [Table/Fig-2].

Variable	Group I (n=50)	Group A (n=50)	p-value
Age (years) (Mean±SD)	5.94±2.46	6.84±2.66	0.204
Weight (kg) (Mean±SD)	16.82±3.68	17.41±3.70	0.423
Gender n (%)			
Male	34 (68)	29 (58)	0.30
Female	16 (32)	21 (42)	
ASA Status n (%)			
I	45 (90)	47 (94)	0.715
II	5 (10)	3 (6)	

[Table/Fig-2]: Demographic data.

SAD insertion parameters: The time taken for SAD placement was comparable in both groups. The p-value of 0.307 showed that the difference between the two groups was statistically non significant [Table/Fig-3].

Variable	Group I	Group A	p-value
Time taken for SAD placement (seconds) (Mean±SD)	16.92±1.19	16.66±1.33	0.307
Number of attempts n (%)			
1	44 (88)	47 (94)	0.487
2	6 (12)	3 (6)	
Ease of insertion (Grade) n (%)			
1	30 (60)	41 (82)	0.024*
2	17 (34)	9 (18)	
3	3 (6)	0	
4	0	0	
Requirement of additional airway manipulations during insertion n (%)			
Yes	10 (20)	2 (4)	0.028*
No	40 (80)	48 (96)	

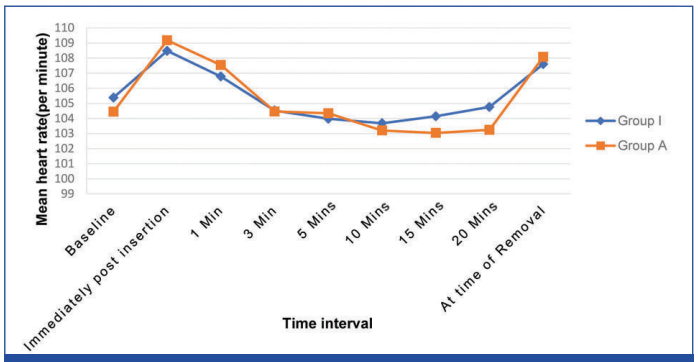
[Table/Fig-3]: Insertion parameters to assess ease of insertion of SAD.
*Fisher-Exact test
p-value <0.05 was considered statistically significant

Both SADs were successfully inserted within two attempts in all participants, and no insertion failures were noted for either SAD. The first attempt insertion rate was comparable between both groups [Table/Fig-3].

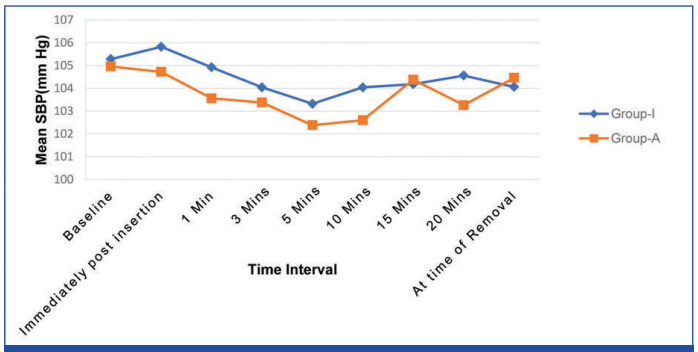
SAD insertion was found to be easier in Group A compared to Group I. Out of 50 patients in Group I, SAD insertion was graded as Grade 1 in 30 (60%) patients, Grade 2 in 17 (34%) patients, and Grade 3 in 3 (6%) patients. In Group A, SAD insertion was graded as Grade 1 in 41 (82%) and Grade 2 in 9 (18%) patients, with no Grade 3 insertion observed. The calculated p-value was 0.024, indicating a statistically significant difference between the two groups [Table/Fig-3].

During the insertion of SAD, patients in Group I required additional airway manipulations compared to patients in Group A. A statistically significant difference was found between Group I and Group A, with a calculated p-value of 0.028 [Table/Fig-3].

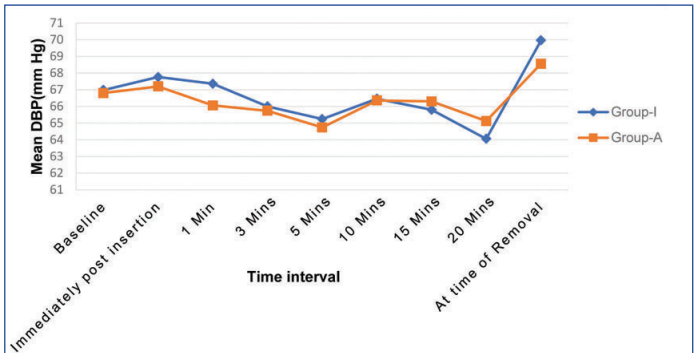
Haemodynamic parameters: Haemodynamic parameters (HR, SBP, DBP, MAP, SpO_2, and $EtCO_2$) were comparable at all time intervals (baseline, immediately after insertion, at 1 min, 3 min, 5 mins, 10 mins, 15 mins, 20 mins, and at the time of removal), and no statistically significant difference was found between the two groups (p>0.05) [Table/Fig-4-9].



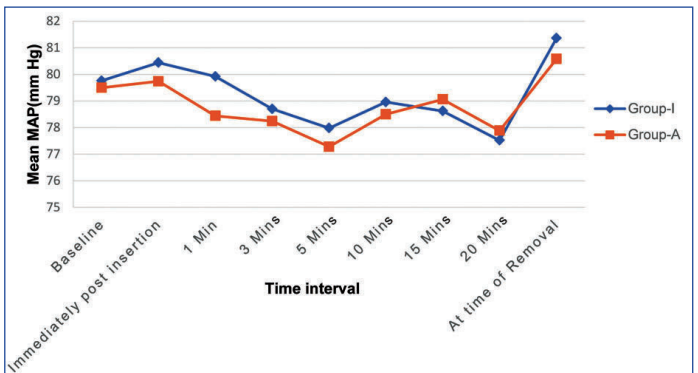
[Table/Fig-4]: Comparison of mean heart rate (per minute) between two groups (p>0.05 at all time intervals).



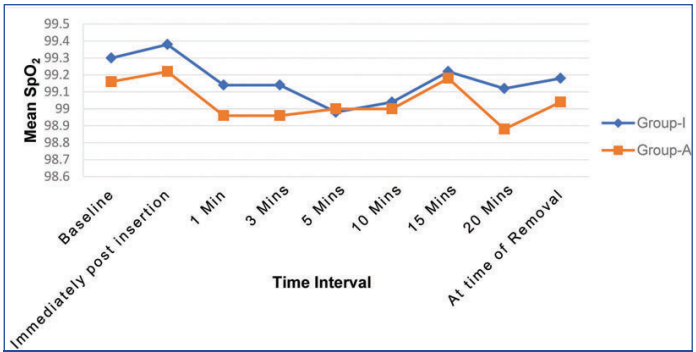
[Table/Fig-5]: Comparison of mean Systolic Blood Pressure (SBP) (mmHg) between two groups (p>0.05 at all time intervals).



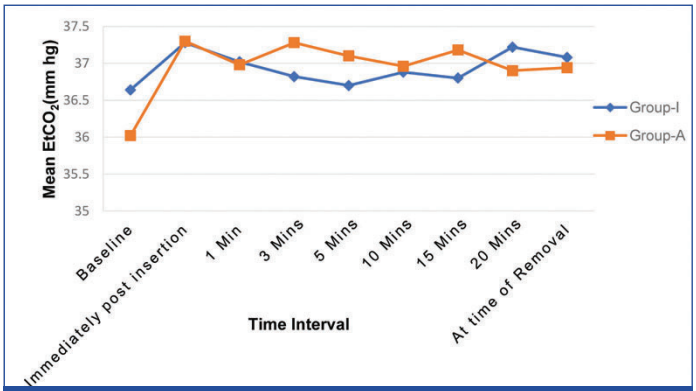
[Table/Fig-6]: Comparison of mean Diastolic Blood Pressure (DBP) (mmHg) between two groups (p>0.05 at all time intervals).



[Table/Fig-7]: Comparison of mean MAP (mmHg) between two groups (p>0.05 at all time intervals).



[Table/Fig-8]: Comparison of mean SpO_2(%) between two groups (p>0.05 at all time intervals.



[Table/Fig-9]: Comparison of mean $EtCO_2$ (mmHg) between two groups (p>0.05 at all time intervals).

Immediate postoperative complications: The overall occurrence of immediate postoperative complications in Group I was 6%, while in Group A, it was 10%. Both groups were comparable as the difference between them was statistically non significant [Table/Fig-10].

Complication	Group I n (%)	Group A n (%)	Fisher-exact value	p-value
Trauma to tongue, teeth or lips	1 (2)	0	1.137	0.998
Laryngospasm	1 (2)	0	1.137	0.998
Blood stain on SAD	1 (2)	3 (6)	1.342	0.617
Coughing	0	2 (4)	2.089	0.495

[Table/Fig-10]: Immediate postoperative complications.

Postoperative sore throat: The overall occurrence of postoperative sore throat in Group I was 12%, and in Group A, it was 24%. Upon arrival in the recovery room, 5 (10%) patients reported mild sore throat, and 1 (2%) reported moderate sore throat in Group I, while in Group A, 9 (18%) patients reported mild sore throat, and 3 (6%) patients reported moderate sore throat [Table/Fig-11]. After one hour, 5 (10%) patients in Group I reported mild sore throat, while in Group A, 9 (18%) had mild sore throat and 1 (2%) patient had moderate sore throat. After six hours, postoperative sore throat was reported in only 1 (2%) patient in Group I, compared to 3 (6%) patients in Group A. In both groups, the severity of postoperative sore throat was mild. After 24 hours, no patient complained of any postoperative sore throat. The difference in the incidence of postoperative sore throat between the two groups was statistically non significant on arrival in the recovery room (p-value=0.302), after one hour (p-value=0.262), after six hours (p-value=0.617), and after 24 hours (0% sore throat) [Table/Fig-11].

Observation period	Grade	Group I n (%)	Group A n (%)	Fisher-exact value	p-value
On arrival in recovery room	1 (None)	44 (88)	38 (76)	2.484	0.302
	2 (Mild)	5 (10)	9 (18)		
	3 (Moderate)	1 (2)	3 (6)		
	4 (Severe)	0	0		
After 1 hour	1 (None)	45 (90)	40 (80)	2.340	0.262
	2 (Mild)	5 (10)	9 (18)		
	3 (Moderate)	0	1 (2)		
	4 (Severe)	0	0		
After 6 hours	1 (None)	49 (98)	47 (94)	1.156	0.617
	2 (Mild)	1 (2)	3 (6)		
	3 (Moderate)	0	0		
	4 (Severe)	0	0		
After 24 hours	1 (None)	50 (100)	50 (100)	–	–
	2 (Mild)	0	0		
	3 (Moderate)	0	0		
	4 (Severe)	0	0		

[Table/Fig-11]: Comparison of postoperative sore throat.

DISCUSSION

The present study compared two second-generation SAD, I-gel and Ambu AuraGain, in terms of ease of insertion, haemodynamic changes, and postoperative sore throat in paediatric patients undergoing general anaesthesia. Both I-gel and Ambu AuraGain showed similar time for SAD placement and the number of attempts required for successful insertion. Although the non nflatable cuff of I-gel helped save time compared to Ambu AuraGain, which requires cuff inflation, the final time was similar because I-gel required additional airway manipulations during insertion. Similar results were found in studies conducted by Kim HJ et al., Lee JH et al., and Alzahem AM et al., [Table/Fig-12] [11,15,17].

In the present study, Ambu AuraGain was easier to insert than I-gel. These findings were in line with the results of the study conducted by Hameed M et al., who found that the Ambu laryngeal mask was easier to insert than I-gel in children. They found that 71.4% of insertions were graded as very easy in the Ambu group, compared to 45.7% insertions in the I-gel group [13]. Similarly, Alzahem AM et al., observed that Ambu AuraOnce was easier to insert than I-gel in children, although the difference between them did not reach statistical significance (100% versus 94%, p-value=0.08). The 90-degree angle in the curvature of Ambu AuraOnce, which was similar to that in Ambu AuraGain, might contribute to easier insertion [17].

In the present study, insertion of I-gel required additional airway manipulations compared to Ambu AuraGain. The I-gel was more prone to slide out and required taping following depth adjustment to maintain an adequate airway. According to the findings of Lee JH et al., in their study comparing I-gel and Ambu AuraGain in anaesthetised children, 8.5% of patients in the I-gel group required additional airway manipulations during surgery to maintain the tidal volume, in contrast to the AuraGain group, where no patient needed additional airway manipulations to achieve adequate ventilation [15]. In their study, Kim HJ et al., observed that airway maneuvers such as adjustment of head/neck position, varying the device insertion depth, or taping of the device were necessary during I-gel placement to provide efficient ventilation. When comparing both devices, Ambu AuraGain required fewer additional airway maneuvers during insertion than I-gel in paediatric patients [11]. In a study by Theiler LG et al., airway interventions were required in 49% of children during I-gel insertion and in 8% of children during Ambu AuraOnce insertion. Ambu AuraGain, used in this study, has a similar 90-degree tube angle as Ambu AuraOnce, which provides a better fit for the supraglottic airway device into the laryngeal anatomy [18].

Haemodynamic parameters did not show any significant difference between I-gel and Ambu AuraGain in this study. Peker G et al., compared insertion parameters of four different types of supraglottic airway devices (Classic LMA, I-gel LMA, Proseal LMA,

S. No.	Author's name and year	Place of study	Sample size	SAD used	Parameters assessed	Conclusion(s)
1.	Theiler LG et al., 2011 [18]	Switzerland	208	I-gel and Ambu AuraOnce	Success at first attempt	No significant difference in both the groups
					Airway interventions during insertion	More for I-gel
2.	Alzahem AM et al., 2017 [17]	Saudi Arabia	112	I-gel and Ambu AuraOnce	Effective airway time	No significant difference in both the groups
					Ease of insertion	Higher ease of insertion in Ambu group
					Number of attempts (1/2/3)	Both inserted successfully within 2 attempts
					Manipulations	10.9 % in I-gel and 2.1% in Ambu
4.	Kim HJ et al., 2019 [11]	South Korea	68	I-gel and Ambu AuraGain	Insertion time	No significant difference in both the groups
					Success rate at first attempt	No significant difference in both the groups
					Requirement of additional Airway Manoeuvres	I-gel group required more additional airway manoeuvres.
5.	Lee JH et al., 2020 [15]	South Korea	93	I-gel and Ambu AuraGain	Number of attempts Requirement of additional manipulations	Both inserted successfully within 2 attempts I-gel required additional manipulations
6.	Hameed M et al., 2020 [13]	Pakistan	70	I-gel and Ambu Laryngeal Mask	Ease of insertion	Ambu Laryngeal mask was easier to insert
					Number of attempts	First attempt success rate higher in Ambu group, Not significant
7.	Present study, 2023	India	100	I-gel and Ambu AuraGain	Insertion time	No significant difference in both the groups
					Number of attempts	Both inserted successfully within 2 attempts
					Ease of insertion	Ambu AuraGain is easier to insert
					Requirement of additional airway manipulations	I-gel required more airway manipulations

[Table/Fig-12]: Comparison of SAD insertion parameters.

Cobra Perilaryngeal airway) in children and found that all these devices did not increase Intraocular Pressure (IOP) and maintained haemodynamic stability [19]. Similarly, Gu Z et al., conducted a study to observe the ventilation effects of I-gel, LMA Supreme, and Ambu AuraOnce with respiratory dynamics monitoring in small children. It was observed that the haemodynamic parameters (HR, MAP, SpO_2) did not show any statistically significant difference, both before and after device insertion. Therefore, it was concluded that all three devices were capable of providing efficient and secure mechanical ventilation in small children [20].

The overall incidence of complications was higher in Group A (10%) than in Group I (6%), but it was statistically non significant. These findings were in line with previous studies [Table/Fig-13] [11,13,15,17,18].

The overall incidence of postoperative sore throat was higher with Ambu AuraGain than with I-gel, but the difference between both groups was statistically non significant in terms of both incidence and severity of sore throat. Hameed M et al., conducted a similar study in children and found that the overall incidence of postoperative sore throat was higher in the Ambu group (17.1%) compared to the I-gel group (5.7%). No statistically significant difference was found in the incidence and severity of postoperative sore throat in both devices upon arrival in the Post Anaesthesia Care Unit (PACU), after one hour, six hours, and 24 hours [13]. Elboghdadly K et al., found in their systematic review of postoperative sore throat that I-gel causes a lesser incidence of postoperative sore throat due to the presence of a non nflatable cuff compared to Ambu laryngeal mask in adults [21].

Similarly, paediatric I-gel also has the potential to decrease postoperative sore throat in children, but the studies conducted were not powered enough to find any difference in complications. They found one review that showed, upon pooling the data, no significant difference was present between I-gel and other supraglottic airway devices [21]. Theiler LG et al., found that sore throat occurred in 3% (n=3) of children in the Ambu group compared to 0% in the I-gel group. No statistically significant difference was found between both devices, which was similar to the results of this study [18].

S. No.	Author's name and year	Place of study	Sample size	SAD used	Parameters assessed	Conclusion(s)
1.	Theiler LG et al., 2011[18]	Switzerland	208	I-gel and Ambu AuraOnce	Postoperative sore throat Complications	No significant difference in both the groups No significant difference in both the groups
2.	Alzahem AM et al., 2017 [17]	Saudi Arabia	112	I-gel and Ambu AuraOnce	Complications	No significant difference in both the groups
4.	Kim HJ et al., 2019 [11]	South Korea	68	I-gel and Ambu AuraGain	Complications	No significant difference in both the groups
5.	Lee JH et al., 2020 [15]	South Korea	93	I-gel and Ambu AuraGain	Complications	No significant difference in both the groups
6.	Hameed M et al., 2020 [13]	Pakistan	70	I-gel and Ambu Laryngeal Mask	Postoperative sore throat Complications	No significant difference in both the groups No significant difference in both the groups
7.	Present study, 2023	India	100	I-gel and Ambu AuraGain	Postoperative sore throat Complications	No significant difference in both the groups No significant difference in both the groups

[Table/Fig-13]: Comparison of postoperative sore throat and other complications.

Limitation(s)

The present study had some limitations. Firstly, the data was collected in an unblinded manner, which can be a possible source of bias. Secondly, all patients with an anticipated difficult airway were excluded from this study. Thirdly, all SADs were inserted by experienced anaesthesiologists in the study; therefore, the results of this study might not apply to less experienced personnel.

CONCLUSION(S)

The present study identified both I-gel and Ambu AuraGain as reliable and safe devices for maintaining an adequate airway in paediatric patients. Haemodynamic parameters were comparable in both groups. However, Ambu AuraGain was easier to insert and required fewer airway manipulations than I-gel during insertion, making it a favourable choice. The incidence of postoperative sore throat and other complications was higher in Ambu AuraGain compared to I-gel. Therefore, a careful insertion of SAD, particularly by experienced personnel, is recommended.

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