Original Article ISSN (O):2395-2822; ISSN (P):2395-2814

Comparative Evaluation of Airtraq™ Optical Laryngoscope with Miller's Blade in Paediatric Patients Undergoing Uro-Surgery: A Randomized Controlled Study

Gyan Prakash Singh[1], Debadas Biswal[2], Soveena Pani[3]

[1]Associate Professor, Department of Urology, S.C.B. Medical College, Cuttack, Odisha, India.
[2]Assistant Professor, Department of Anaesthesiology, S C B Medical College, Cuttack, Odisha, India.
[3]Junior Resident, Department of Anaesthesiology, S C B Medical College, Cuttack, Odisha, India.

Received: July 2020
Accepted: July 2020

ABSTRACT

Background & Aim: Now a days the Airtraq™ optical laryngoscope is commonly used video laryngoscope for paediatric patients besides the fibre-optic bronchoscope. Few stidies are in literature comparing airtraq with miller blade in pediatric intubation. So we compared Airtraq™ with the Miller blade for intubation inpaediatric patients. **Methods:** This is a prospective, randomized study which was conducted in a tertiary care hospital in Odisha. 72 children of ASA Grade I–II, aged 2–10 years, posted for elective surgery requiring endotracheal intubation were randomly allocated in to two group of 36 each.All intubation was done using either a Miller blade (MB group) or Airtraq™ laryngoscope(AT group). The primary aim of study was time required for intubation. Secondary aim were ease of intubation, number of attempts of intubation, glottic opening score (POGO), haemodynamic changes and complications like airway trauma.**Results:** Intubation time was lesser in miller laryngoscope (13.76 ±4.20 compared to airtraq (21.28 ±5.50) which was significant. The number of first attempts at intubation were 80.6% for the Miller laryngoscope and 91.7% for the Airtraq™ which was not significant. Ease of intubation in both Miller group and in Airtraq™ group was not significant. The median POGO score was 100 86.1% in the Miller group and 94.4% in the Airtraq™ group. Haemodynamic changes in both group were maximum and most significant immediately and 1 min after intubation. There was no difference in incidence of airway trauma and sore throat in both groups.**Conclusion:**Miller laryngoscope took less time for intubation but the Airtraq™ reduced the difficulty of tracheal intubation.

Keywords:Intubation, laryngoscopes, paediatrics, randomized controlled trial, surgery.

INTRODUCTION

Anatomical & physiological differences between adult and paediatric airway makes the later vulnerable to complications while trying to secure the airway.[1] Hence, duration of intubation is an important factor in such groups. The available video laryngoscopes for airway management in paediatric practice are the GlideScope (Verathan Medical, Bothell, Washington, USA), Airtraq™ (Viczya Protocol, Spain), Truview EVO2® (Truphatek International Ltd, Netanya, Israel), C. Mac (Karl Storz Ltd., Slough, UK), McGrath® Series 5 (LMA North America),[19] Pentax AWS® (Pentax Corporation, Tokyo, Japan).[1]

Airtraq™ was chosen for our study because of simplicity of the design, portability, easy availability of smaller sizes, and fast learning curve.[2]Airtraq™ has already been proved to be a very useful tool for various difficult intubation scenarios as demonstrated by Maharaj CH et al.[3]Vlatten et al.[4]Hirabayashi et al.[5] But there are few studies on the use of Airtraq™ comparing to miller blade in paediatric population. Hence, Miller's blade (MB) is compared with the Airtraq™ (AT) in paediatric patients undergoing surgery, requiring endotracheal intubation.

We hypothesized that tracheal intubation in paediatric patients undergoing elective surgery using Airtraq™ optical laryngoscope will be associated with lesser intubation time as the Miller blade laryngoscope. The primary aim of the study was to compare the time taken for intubation using the Airtraq and Miller blade laryngoscopes. Secondary aims of the study was to compare number of intubation attempts, POGO scoring, failure to intubate, ease of intubation, haemodynamic changes & any complications like airway trauma or sore throat.

Corresponding Author
Dr. Debadas Biswal, Assistant Professor, Department of Anaesthesiology,
S C B Medical College, Cuttack, Odisha, India.

MATERIALS AND METHODS

The present study, entitled - "Comparative evaluation of Airtraq™ optical Laryngoscope with Miller blade in Paediatric patients undergoing elective uro- surgery, requiring Endotracheal intubation: A randomized controlled study" was conducted by the Department of Anaesthesiology and Critical Care, SCB Medical College, Cuttack during the period November 2017 – October 2019. Following approval by the institutional ethical committee and legal consent from the concerned guardians, we studied 72 ASA I & II patients of either sex, aged 2-10 years and posted for elective surgery requiring general anaesthesia.

Learning curve was achieved by intubating 40 times on pediatric patients, using each of the devices prior to start of study.

Inclusion Criteria

- Children between age group 2-10 yrs., of both sexes
- Weight more than 10 kgs
- ASA Grade I or II
- Mouth opening of atleast 12 mm

Exclusion criteria

- Upper respiratory tract infection
- Gastro Esophageal Regurgitation Disease
- Raised Intra Cranial Pressure
- Airway related conditions (trismus, trauma and mass)
- Congenital disorders or facial deformities (Pierre-Robin syndrome, etc.)

All the patients were randomly divided into two groups of 36 each.

Group AT: Airtraq optical laryngoscope group

Group MB: Miller blade laryngoscope group

Randomization was made using computer based random number generator. The allocation no was concealed in a sealed opaque envelope, and opened by the anesthesiologist in the operation theatre.

Anaesthetic technique

Preoperatively, patient's history was taken and clinical& airway examination was done. Consent was mandatorily taken from both the parents of the patient after explaining them the risks and benefits of the procedure in regional language. Solid food was allowed up to 8 hours before the surgery and plain water upto two hours before surgery.

All patients were uniformly premedicated with inj. Midazolam 0.05 mg/kg, injGlycopyrolate 0.005 mg/kg, inj. Ondansetron 0.15 mg/kg in the preoperative holding area and wheeled in on a trolley. In the operating room, monitoring was established on all patients to monitor ECG, heart rate, SpO2, NIBP and end tidal carbon dioxide (EtCO2). The baseline parameters were recorded before induction of anaesthesia. Intravenous Pentazocine 0.5 mg/kg was administered. After pre oxygenation with 100% oxygen for 3 minutes, anaesthesia was induced with inj. Propofol (2mg/kg) and injAtracurium 0.6 mg/kg. After mask ventilation for 3 minsand adequate muscle relaxation was obtained, trachea was intubated by an anaesthesiologist using either Airtraq™ laryngoscope with channelled blade (Group AT) or the Miller blade laryngoscope (Group MB), according to the allotted group. Anesthesia was maintained with O2,N2O,atracurium and sevoflurane (1-2%).

Recording of parameters

1. Time taken for laryngoscopy & intubation: defined as time from introduction of the device until the first appearance of the capnograph wave form on the monitor.
2. POGO SCORING (Percentage of Glottic Opening)

POGO	GlotticVisualisation
0%	No glottic structures, visible
33%	Only lower 3 rd of the vocal cords and arytenoids seen
100%	Entire glottic aperture visualised

3. Number of attempts: An attempt was defined as the blade being removed from the mouth before re insertion.

   An attempt was considered failed if trachea could not be intubated in 3 attempts. Intubation attempt was terminated and labelled as unsuccessful when there was desaturation (SpO2 < 92%), evidence of cardiac instability such as bradycardia or when time taken for intubation exceeded 120 s; whichever occurred earlier.

4. Ease of tracheal intubation

Grade I	No external manipulation of larynx was required to intubate
Grade II	External manipulation of the larynx was required to intubate
Grade III	Failed intubation

5. **Changes in Mean Arterial Pressure [Map], Heart Rate [HR] & SpO2:** Immediate pre induction value was recorded and considered as the base line value. Thereafter BP, HR and SpO2 were recorded immediate post induction, 1 minute after laryngoscopy; and thereafter at 5, 10 and 15 minutes after intubation.
6. **Postoperative Complications:**Complications like blood stain on laryngoscope blade and soreness of throat 24 hours post operatively were recorded.

Statistical Analysis

For testing a hypothesis we used different statistical methods. The appropriate method is usually governed by the design of the study, the type of data collected and the type of relationship being evaluated. In our study Statistical analysis was performed using Statistical package for social sciences (SPSS) version 24.4 software. The results were presented in number, percentage, mean and standard deviation as appropriate.

With alpha error fixed at 0.05 and type II error fixed at 0.2,for a desired statistical power level of 0.8, minimum required sample size per group was calculated to be 32 to detect 25sec reduction in intubation time in airtraq group. 36 patients in each group were included in the study to compensate for any loss.

Demographic data was analyzed using Chi square test, Fischer's exact test. The POGO score & intubation time were compared using both t-test and Fischer's exact test. Fischer's exact test was used for analyzing the number of intubation attempts and ease of intubation. The hemodynamic data between time intervals and between groups were compared using t-test. Incidence of blood staining and sore throat were compared with Fischer exact test. A p value &< 0.05 was considered significant.

RESULTS

The present study consists of 72 patients, who were randomly allocated using computer generated random numbers into two groups with 36 patients in each group.

- **Group AT:** Airtraq optical laryngoscope group
- **Group MB:** Miller blade laryngoscope group

Table 1: Comparison of demographic parameters between both groups

Variables	Type of Procedure		Total (n=72)	p value
	Group AT(n=36)	Group MB (n=36)		
Age (in years)				
1-5	18(50%)	13(36.1%)	31(43.1%)	0.234
6-10	18(50%)	23(63.9%)	41(56.9%)	
Gender				
Female	20(55.6%)	16(44.4%)	36(50%)	0.346
Male	16(44.4%)	20(55.6%)	36(50%)	
Weight (kg)				
<20	18(50%)	15(41.7%)	33(45.8%)	0.235
20-30	16(44.4%)	14(38.9%)	30(41.7%)	
31-40	2(5.6%)	7(19.4%)	9(12.5%)	
ASA				
I	29(80.6%)	24(66.7%)	53(73.6%)	0.181
II	7(19.4%)	12(33.3%)	19(26.4%)	

[Table 1] demonstrates demographic parameters of the two groups. They were comparable between both the groups.

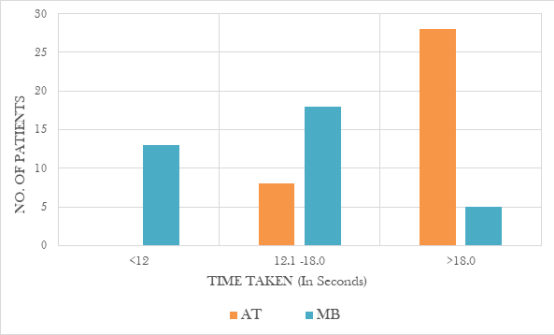

Figure 1: Mean duration of intubation in two groups

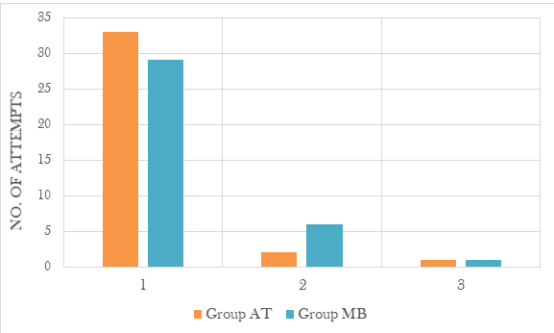

Figure 2: Number of attempts taken to intubation in both groups

[Figure 1] shows the distribution of patients according to time taken to intubate in the two groups. 0% of the patients in Group AT and 36.1% of the patients in Group MB were intubated in less than 12 seconds. 22.2% of the patients in Group At and 50 % of the patients in Group MB were intubated in 12.1- 18.0 seconds. 77.8% of the patients in group AT and 13.9% of the patients in Group MB were intubated in more than 18.1 seconds. Mean time taken for intubation was 21.28±5.50 seconds in Group AT as compared to 13.76±4.20 seconds in Group MB. The data was statistically significant with a p value of 0.0016. [Table 2] shows the number of attempts taken to intubate in both the groups. 33 patients in group AT and 29 patients in Group MB were intubated in the first attempt; 2 patients in Group AT and 6 patients in Group MB were intubated in the second attempt and 1 patient in group AT & 1 patient in Group MB were intubated in the third attempt. There was no intubation failure in both the groups. The difference was statistically not significant with a p value of 0.364.

Table 2: Pogo score on laryngoscopy in both groups

POGO Score	Type of Procedure		Test of Significance
	Group AT (n=36)	Group MB (n=36)	
0	0(0%)	1(2.8%)	Fisher Exact Test p value = 0.429
33	2(5.6%)	4(11.1%)	
100	34(94.4%)	31(86.1%)	

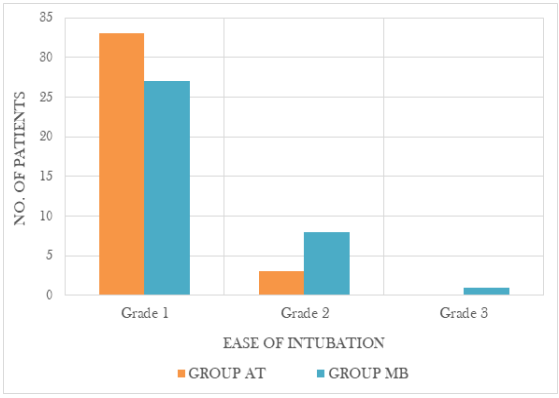

Figure 3: Incidence of ease of tracheal intubation in both groups

[Table 2] depicts the distribution of patients according to POGO score obtained in the two groups. Group AT had 94.4% of patients with 100%

POGO while Group MB had 86.1% patients with POGO score 100%. 5.6% of patients in Group AT had POGO score 33% compared to 11.1 in Group MB. There were no patients with 0% POGO in Group AT but 2.8% had a POGO score of 0%. The p value of 0.429 signifies there is a non-significant difference in POGO scoring between the two groups. [Figure 3] demonstrates the incidence of ease of tracheal intubation in the two groups. In Group AT 91.7% patients were intubated without any external manipulation while in Group MB only 75% patients were intubated without any external aid. There was no incidence of failed intubation in both the groups. There was a non-significant statistical difference between the groups with a p value of 0.111.

Table 3: Incidence airway trauma in both groups

Airway Trauma	Type of Procedure		Test of Significance
	Group AT	Group MB	
No	34(94.4%)	32(88.8%)	Fisher Exact Test p Value = 0.207
Yes	2(5.5%)	4(11.1%)	
Total	36(100%)	36(100%)	

[Table 3] depicts the incidence of soft tissue injury during laryngoscopy monitored by the blood staining of the laryngoscope blade, in both groups. Group AT had 2 patients with lip injury whereas group MB had 4 cases of soft tissue injury during laryngoscopy. The difference was not statistically significant with a p value of 0.207.

Table 4: Incidence post opeartive sore throat in both groups

Sore Throat	Type of Procedure		Test of Significance
	Group AT	Group MB	
No	34(94.4%)	30(83.3%)	Fisher Exact Test p Value = 0.114
Yes	2(5.6%)	6 (16.7%)	
Total	36(100%)	36(100%)	

[Table 4] gives the incidence of sore throat 24 hours post operatively in both the groups. 2 patients in Group AT and 6 patients in Group MB had sore throat but the data was not statistically significant (p=0.114).

[Figure 4] gives the comparison of the heart rate in both the groups. The immediate pre induction heart rate was taken as the base line. Comparison between base line heart rate and heart rate during intubation & at 1, 10, 15 minutes post intubation was done. The base lines and post induction values were comparable in both the groups. There was a significant rise in the heart rate from the baseline, during intubation & at 1 minute after intubation in both the groups.Even though the HR was not significant statistically but was clinically significant .However, in both the groups the heart rate returned to the baseline by 5 minutes after intubation and remained so at 10 and 15 minutes after intubation.

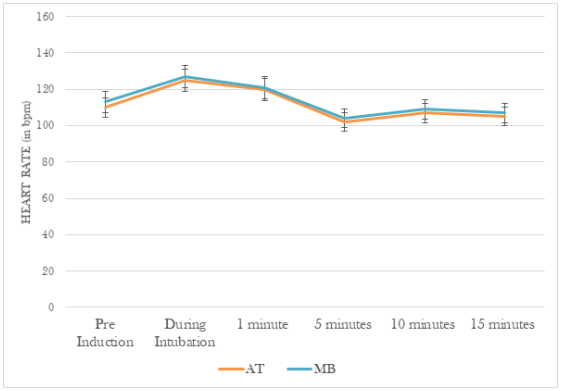

Figure 4: Comparison of heart rate between both groups

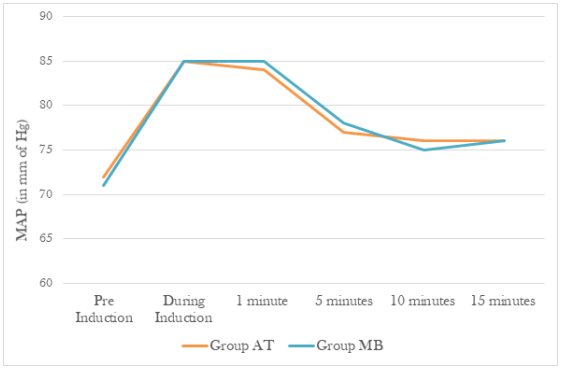

Figure 5: Comparison of map between both groups

Table 5: Comparing the various intubation parameters between two groups

Parameters / Variables	Type of Procedure		p Value	Test of Significance
	Group AT	Group MB		
Time Taken (Mean ± SD)	21.28±5.50	13.76±4.20	0.016	Fischer's exact test
No. of Attempts (1/2/3)	33/2/1	29/6/1	0.364	Fischer's exact test
Ease of Intubation (1/2/3)	33/3/0	27/8/1	----	Fischer's exact test
POGO (Mean ± SD)	96.28±15.56	89.78±26.29	0.206	Fischer's exact test
Oesophageal Intubation (No/Yes)	0/36	4/32	0.115	Fischer's exact test
Blood Staining (No/Yes)	2/34	7/29	0.207	Fischer's exact test
Sore Throat(No/Yes)	2/34	6/30	0.226	Fischer's exact test

[Figure 5] gives the comparison of the mean arterial pressure (MAP) in both the groups. The immediate pre induction mean arterial pressure was taken as the base line. Comparison between base line mean arterial pressure versus the mean arterial pressure during induction & at 1, 5, 10 and 15 minutes post intubation was done. The base line, during intubation& post induction values were comparable in both the groups. There was a rise in the mean arterial pressure from the baseline to during

intubation & at 1, 3 minutes after intubation in both the groups .The rise in MAP was not statistically significant .However, in both the groups the mean arterial pressure returned to the baseline by 5 minutes after intubation and remained so at 10 and 15 minutes after intubation.

DISCUSSION

Airway related problems account for majority of anaesthetic morbidity in paediatric patients. The DAS & the AIDAA guidelines recommends VL as a primary option or as a rescue device for intubation to shorten the time in securing the airway and reducing patient morbidity].[8] Although different kinds of VLs are available for use in adults since more than a decade, paediatric sizes were introduced more recently.For pediatric airway management,miller blade is commonly used the decision to incorporate a particular device depends on cost, ease of availability, and use. We selected Airtraq™ for our study because of the simplicity of the design, portability, easy availability of smaller sizes, low cost, and fast learning curve and compared with miller blade in pediatric endotracheal intubation.

The demographic profile of both the groups (age, gender, weight, ASA grading) were all comparable. The mean duration taken for intubation using the Airtraq™ (Group AT) was 21.28±5.50 sec while the time taken for intubation using Milers blade (Group MB) was 13.76±4.20 sec. Hence, tracheal intubation using Airtraq took approx. 8 seconds more than the conventional Miller's blade. The time taken by Airtraq™ was nearly 8 seconds longer and when compared it was statistically significant. This finding is clinically important, as the paediatric population is highly prone to rapid desaturation. The findings of our study corroborated with the findings of White MC et al.[9] and Vlatten A et al.[10] In the study conducted by White MC et al.[9] the median duration of intubation using Airtraq™ was 47.3 sec and using Miller's blade was 26.3 seconds. Vlatten A et al.[10] performed the study and the time taken to intubate using Airtraq™ was longer (22.5 seconds) than the Direct Laryngoscope (18 seconds). Whereas, our study contradicted the findings of Das B et al.[11] and Soerensen M et al.[12] Das B et al.[11] found that intubation was about 3.6 s faster with the Airtraq ™ in comparison with Miller laryngoscope, though it was not significant. Soerensen M et al.[12] found out that intubation using Airtraq in paediatric patients (15.8 seconds). This may be due to the fact that, when the DL is used manipulation of the ETT can be done in all directions and planes due to which it is easier to insert a tube after having a view. But in the Airtraq™, owing to its structural consideration, has an inbuilt conduit for stationing the ETT. This conduit doesn't allow for free manipulation of the device so the whole instrument has to be manoeuvred if the ETT positioning or repositioning has to be done.

In our study the number of first pass attempts were higher with Airtraq™ (91.7%) than with the Miller's blade laryngoscope (80.6%) which were consistent with the findings of Das B et al.[11]

We had a median POGO score of 100 with Airtraq ™ compared to 75 with Miller's blade. White et al.[9] also showed similar POGO score in their study. They revealed median POGO score of 100 with Airtraq ™, compared to 77 with conventional laryngoscopy. Das B et al.[11] also had similar results as our study with a median POGO score of 75 with Miller's blade compared to 100 with Airtraq ™.

We demonstrated 100% overall success rate with both the Airtraq ™ and the Miller laryngoscope in paediatric age group in this study. This was consistent with the findings of Das B et al.[11] and White MC et al.[9] who also demonstrated a 100% success rate in intubation in both the groups in their study.

Airtraq™ had an excellent ease of intubation (91.7%) as compared to the Miller's blade laryngoscope (75%) since manoeuvring was not required in most of the cases while using the former. The findings were similar to Das B et al.[11]Riad et al.[7]Maharaj CH et al.[14] who showed similar results regarding ease of intubation in their studies. Since, the glottis view was significantly improved with Airtraq™ in our study, only minor manipulations needed with Airtraq ™ to align the vocal cord with the pre-loaded tube.

Airway trauma was noted in only 2 patients using Airtraq™ which were mostly lip injuries caused because of the bulkiness of the introducer blade. In contrast, the Miller's laryngoscope, which is less bulky (especially in the width of the blade), did not cause lip injury but 4 cases of posterior pharyngeal wall injuries were noted due to the limited space for manipulation in the oropharynx. These findings were consistent with the findings of Das B et al.[11] in which airway trauma occurred in three (9.09%) patients in the Miller group and one patient (3.33%) in the Airtraq ™ group.

The Airtraq™ had less haemodynamic variation which was depicted by a lesser alteration in MAP & HR clinically as compared to Miller's blade. In direct laryngoscopy, the oropharyngeal curve and the pharyngoglottotracheal curve need to be aligned to permit a direct glottis view. Where as in Airtraq™, these curves need not be necessarily aligned. Hence, Airtraq™ used less force to accomplish the procedure so patients were haemodynamicaly stable. This is because there is less stimulation of the periglottic sympathetic plexuses which is beneficial when situations requiring blunting of laryngoscopic response during intubation is advocated. These findings were consistent with findings of Das B et al.[11] in which haemodynamic changes in terms of pulse rate and mean arterial pressure (MAP) were maximum and most significant immediately and 1 min after intubation in Miller's group with patients

remaining stable in the Airtraq™ group. Riad et al.[42] reported similar results with their study, where there was a lower alteration in the haemodynamic parameters using Airtraq™.

There are a few limitations to the study we performed. The patients in the study have normal airways. So, extrapolating the data to a scenario of difficult intubation may not yield the same results as ours. The performing anaesthesiologist could not be blinded in the study because of the distinctive variability in looks and features of the devices in the study. Also, the parameters in the study may vary from person to person. If an experienced anaesthesiologist is performing it, then it may take lesser time than the one who is less experienced. Subjectivity occurs with other parameters such ass POGO and ease of intubation which may not make the results applicable to all the settings.

CONCLUSION

The Airtraq™ is a novel device for intubation in paediatric patients. It provides an excellent view of the glottis, with improved POGO scores, good ease of intubation with good haemodynamic stability and less complications but at the cost of an increased duration of intubation. Hence, limiting the use of Airtraq™ to situations where an anticipated difficult intubation is to be encountered will prove more useful.

REFERENCES

1. Fiadjoe JE, Nishisaki A, Jagannathan N et al. Airway management complications in children with difficult tracheal intubation from the Pediatric Difficult Intubation (PeDI) registry: a prospective cohort analysis. Lancet RespirMed. 2016; 4:37–48.
2. Doherty JS, Froom SR, Gildersleve CD. Pediatric laryngoscopes and intubation aids old and new. PaediatrAnaesth. 2009;19(Suppl 1):30–7.
3. Maharaj CH, Costello J, Higgings BD, Harte BH, Laffey JG. Retension of tracheal intubation skills by novice personnel: A comparison of the Airtraq and MacintochLaryngoscoe. Anaesthesia. 2007;62:272-8.
4. Valatten A, Soder C. Airtraq optical laryngoscope intubation in a 5 month old infant with a difficult airway because of Robin sequence. PaediatrAnaesth. 2010;20:374-5.
5. Hirabayashi Y, Shimada N, Nagashima S. Tracheal intubation using PediatricAirtraq optical laryngoscope in a patient with Treacher Collins syndrome. PaediatrAnaesth. 2009;19:915-6.
6. Maharaj CH, Higgins BD, Harte BH, Laffey JG. Evaluation of intubation using the Airtraq™ or Macintosh laryngoscope by anaesthetists in easy and simulated difficult laryngoscopy – A manikin study. Anaesthesia. 2006;61: 469–77
7. Riad W, Moussa A, Wong DT. Airtraq ™ versus Macintosh laryngoscope in intubation performance in the paediatric population. Saudi J Anaesth. 2012;6:332-5.
8. Pawar DK, Doctor JR, Raveendra US, Ramesh S, Shetty SR, Divatia JV, Myatra SN, Shah A, Garg R, Kundra P, Patwa A, Ahmed SM, Das S, Ramkumar V. All India Difficult Airway Association 2016 guidelines for the management of unanticipated difficult tracheal intubation in Paediatrics. Indian J Anaesth 2016;60(12):906-14
9. White MC, Marsh CJ, Beringer RM, Nolan JA, Choi AY, Medlock KE, et al. A randomized, controlled trial comparing the Airtraq TM™ optical laryngoscope with conventional laryngoscopy in infants and children. Anaesthesia 2012;67:226-31
10. Vlatten A, Fielding A, Bernard A, Litz S, MacManus B, Soder C, et al. Comparison of the Airtraq laryngoscope to the direct laryngoscopy in the pediatric airway. Journal of Paediatric Intensive Care 2012;1(2):71-76.
11. Das B, Samanta A, Mitra S, Jamil SN. Comparative evaluation of Airtraq™ optical Laryngoscope and Miller's blade in paediatric patients undergoing elective surgery requiring tracheal intubation: A randomized, controlled trial. Indian J Anaesth. 2017;61(4):326–331.
12. Sørensen MK, Holm-Knudsen R. Endotracheal intubation with Airtraq TM® versus storz ® videolaryngoscope in children younger than two years – A randomized pilot-study. BMC Anesthesiol2012 ;30;12:7.
13. Thakare DW, Malde AD. An observational study of feasibility of tracheal intubation using Airtraq in pediatric population. J AnaesthesiolClinPharmacol. 2017;33(3):365–370.
14. Maharaj CH, O'Croinin D, Curley G, Harte BH, Laffey JG. A comparison of tracheal intubation using the Airtraq TM® or the Miller laryngoscope in routine airway management: A randomized, controlled clinical trial. Anaesthesia 2006;61(11):1093-9.

How to cite this article: Singh GP, Biswal D, Pani S. Comparative Evaluation of Airtraq™ Optical Laryngoscope with Miller's Blade in Paediatric Patients Undergoing Uro-Surgery: A Randomized Controlled Study.Ann. Int. Med. Den. Res. 2020; 6(4):SG47-SG52.

Source of Support: Nil, **Conflict of Interest:** None declared