



## Anesthesiology

## COMPARISON OF TWO DIFFERENT INSERTION TECHNIQUES WITH LMA IN ADULTS- STANDARD VERSUS ROTATIONAL.

**Dr. Abhishek J Narayan\***

Resident, Department Of Anaesthesiology, Yenepoya Medical College, Deralakatte, Mangalore.\*Corresponding Author

**Dr. Habib Rahaman**

Professor, Department Of Anaesthesiology, Yenepoya Medical College, Deralakatte, Mangalore.

**ABSTRACT** **Introduction** The Laryngeal Mask Airway is a useful airway device for airway management during general anesthesia and for emergency situations. The use of disposable more rigid LMAs is increasing and may be other insertion techniques will be described for these LMAs in the future. 90 degrees rotational or lateral techniques might be considered as the best ways for LMA insertion compared to the standard technique in compared to the success rate of insertion and complications hence we a study to assess the best technique of insertion of LMA with high success rates and less adverse events.

**Materials and Methods** A prospective, observational study was done after obtaining ethical committee clearance and written informed consent 100 Adult patients, 50 in each group admitted in Yenepoya Medical College Hospital, requiring surgeries of short duration were posted for various short duration surgeries requiring General anesthesia was performed using LMA with spontaneous breathing were and were categorized into two groups standard and rotational insertion techniques and various parameters were compared.

**Results** We found that there was statistically significant difference in the number of attempts between the group-R and the group-S tube with a p value of .001 using the independent samples of t test 2, tailed significance. On evaluation of the age distribution in the study groups, we found that the mean age in the group-R was 33.4 years and the 38.03 years. group-R males made up 46.7% of the population and females 53.3% and in the group-R males made up 43.3% of the population and females 56.7%. group-R was 56.7 kgs and the group-R was 55.3kgs the mean weight in the group-R was 162.47cms and the group-R was 160.2cms. There was no statistically significant with a p value of .more than 0.05 using the independent samples of t test 2 tailed significance.

We found that there was statistically significant difference in the number of attempts, sore throat hoarseness of voice, incidence of trauma, mucosal tears, the duration that were needed for insertion was lesser in the group-R than the group-S tube with a p value of .001 using the independent samples of t test 2, tailed significance.

we found that there was no statistically significant difference in the SPO2, Heart rate and the mean arterial pressure throughout the surgery between the group-R and the group-S tube with a p value of .254 using the independent samples of t test 2, tailed significance.

**CONCLUSION** We concluded that rotational technique technique is practically easy, needs less effort; consequently it is associated with the least complications.

## KEYWORDS :

## INTRODUCTION

The Laryngeal Mask Airway is a useful airway device for airway management during general anesthesia and for emergency situations. As an alternative airway device the LMA is recommended for use during CPR because it is quicker and easier to insert than a tracheal tube. The standard method of insertion described by Dr. Brain is relatively easy, but sometimes it is impossible to insert the LMA with the standard method. However ease and time of airway management may be of special importance in emergent situations. Since its inception the LMA has undergone various modifications in type and material, which have made other methods of insertion possible, quicker and easier than the standard method. Intraoral manipulation can put the operator at risk of finger trauma and infection. However it is not possible to avoid intraoral manipulation when the standard technique or the classic LMA is used. Brimacombe and Keller showed that insertion of a disposable LMA does not require insertion of the finger into the patient's mouth. The use of disposable more rigid LMAs is increasing and may be other insertion techniques will be described for these LMAs in the future. 90 degrees rotational or lateral techniques might be considered as the best ways for LMA insertion compared to the standard technique in compared to the success rate of insertion and complications hence we a study to assess the best technique of insertion of LMA with high success rates and less adverse events.

## MATERIALS AND METHODS

A prospective, observational study was done after obtaining ethical committee clearance and written informed consent 100 Adult patients, 50 in each group admitted in Yenepoya Medical College Hospital, requiring surgeries of short duration were posted for various short duration surgeries requiring General anesthesia was performed using LMA with spontaneous breathing were and were categorized into two groups standard and rotational insertion techniques with 50 in each group by random allocation. In standard technique (group-S), LMA was placed using the Brain's insertion technique. In rotational technique (group-R), LMA was inserted using the guedel airway

insertion technique. The ease or smooth LMA insertion was the outcome of study and was recorded on the basis of number of LMA insertion attempts, LMA insertion time from removal of face mask to confirmation of chest expansion and capnographic appearance and development of laryngospasm, hypoxaemia (SpO<sub>2</sub> < 90%) during the induction of anaesthesia and the incidence of trauma (labelled as blood stained LMA on removal).

## RESULTS

On evaluation of the age distribution in the study groups, we found that the mean age in the group-R was 33.4 years and the 38.03 years. group-R males made up 46.7% of the population and females 53.3% and in the group-R males made up 43.3% of the population and females 56.7%. group-R was 56.7 kgs and the group-R was 55.3kgs the mean weight in the group-R was 162.47cms and the group-R was 160.2cms. There was no statistically significant with a p value of .more than 0.05 using the independent samples of t test 2 tailed significance.

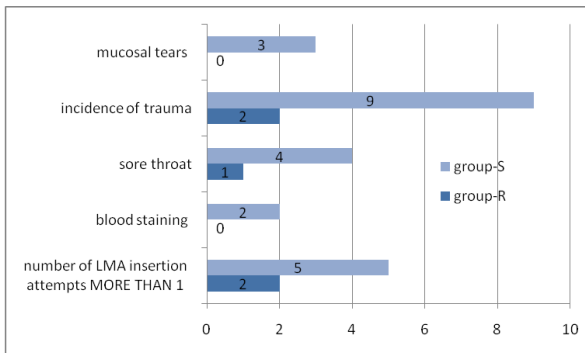
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TABLE 1: Parameters In The Study

PARAMETERS	FREQUENCY		PERCENTAGE		P-VALUE
	group-R	group-S	group-R	group-S	
number of LMA insertion attempts more than 1	2	5	4	10	<.001

blood staining	0	2	0	4	<.001
sore throat	1	4	2	8	<.001
incidence of trauma	2	9	4	18	<.001
mucosal tears	0	3	0	6	<.001



GRAPH 1: Parameters In The Study

**DISCUSSION**

Ata Mahmoodpoor et al<sup>1</sup> stated that Lateral technique is practically easy, does not require approaching the back of the mouth and it needs less effort; consequently it is associated with the least complications. Mohammad<sup>2</sup> concluded that the airway method can be assumed as a preferred simplified method with few complications for inserting LMA. Dileep Kumar et al<sup>3</sup> stated that statistically insignificant difference was found for the time duration and number of LMA insertion attempts. The incidence of trauma was significantly noted in standard insertion technique (28%) compared to (6%) in rotational insertion technique (p = 0.) Raghavan et al<sup>4</sup> stated that significant 100% overall success rate was observed in rotational technique than the standard technique (93%). The incidence of blood staining and sore throat was significantly lower with the rotational technique (9% and 8%) than the other group (36% and 29%) respectively. Merih Eglen et al<sup>5</sup> concluded that Triple airway maneuver technique showed higher overall success rates and allows shorter insertion time for LMA insertion and should therefore be kept in mind for emergent situations.

**CONCLUSION**

We concluded that rotational technique technique is practically easy, , needs less effort; consequently it is associated with the least complications.

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