

**A COMPARATIVE STUDY OF CARDIOVASCULAR RESPONSE TO
LARYNGEAL MASK AIRWAY INSERTION AND ENDOTRACHEAL
INTUBATION IN ELECTIVE SURGERY PATIENTS AT THE
KENYATTA NATIONAL HOSPITAL.**

**A DISSERTATION PRESENTED IN PART FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF A DEGREE OF MASTERS
OF MEDICINE IN ANAESTHESIOLOGY, UNIVERSITY OF NAIROBI**

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**A COMPARATIVE STUDY OF CARDIOVASCULAR RESPONSE TO LARYNGEAL MASK
AIRWAY INSERTION AND ENDOTRACHEAL INTUBATION IN ELECTIVE SURGERY
PATIENTS AT THE KENYATTA NATIONAL HOSPITAL.**

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DECLARATION:

This dissertation is my own original work and has not been presented for the award of a degree in any other university in Kenya.

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This dissertation has been submitted for the award of the degree of masters of medicine in Anaesthesiology with our approval as the university supervisors.

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LIST OF ABBREVIATIONS

ASA	American society of Anaesthesiologists
DBP	Diastolic blood pressure
ETT	Endotracheal tube
GA	General anaesthesia
HR	Heart rate
KNH	Kenyatta National Hospital
LMA	Laryngeal mask airway
MAP	Mean arterial pressure
RPP	Rate pressure product
SBP	Systolic blood pressure

SUMMARY

Background: Tracheal intubation is a harmful stimulus that tends to provoke a marked sympathetic response manifested as tachycardia and hypertension which is predominantly deleterious in coronary or cerebral circulation of high risk patients. The LMA is designed primarily as a means of offering some of the advantages of securing the airway while avoiding fundamental disadvantages of endotracheal intubation.

In KNH we receive patients who suffer from hypertension, some form of cardiovascular and cerebrovascular disease. These groups of high risk patients require controlled hemodynamic variables peri-operatively in order to get a better outcome. Therefore, controlled hemodynamic response while securing the airway, is of great importance.

Objective: The main objective was to evaluate cardiovascular responses to LMA insertion and compare them with those obtained during laryngoscopy and tracheal intubation in elective surgery patients at KNH.

Methods: This is a prospective randomized observational study. 116 adult patients going in for elective surgery were recruited in the study. Patients were randomly allocated into two groups. Group 1 was managed using LMA appropriate for the estimated weight and group 2 was managed using laryngoscopy and tracheal intubation.

Results: In this study no significant rise in HR was seen during LMA insertion and the rise in other parameters was not more than 7% as compared to ETT insertion where the percentage rise in parameters was at a range of 25-70%. The hemodynamic changes were also short lived in the LMA group compared to the ETT group.

Conclusion: Therefore, where LMA is not contra- indicated, it should be recommended in conditions where a hyperdynamic response might be deleterious.

