IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 25, Issue 5 Ser. 4 (May. 2026), PP 25-27
www.iosrjournals.org

Our Experience With Baska Mask In Patients Undergoing Laparoscopic Surgeries: A Case Series

Dr.Suraj K P, Dr. Vinod Hosalli, Dr.Akshay Ekbote

Abstract

Introduction

Airway management in laparoscopic surgeries is challenging due to increased intra-abdominal pressure and ventilatory demands. The Baska mask, a third-generation supraglottic airway device, is designed for easy insertion and minimal haemodynamic disturbance.

Objectives

To evaluate the clinical performance of the Baska mask in patients undergoing laparoscopic surgeries, with emphasis on ease of insertion and hemodynamic response.

Methods

This observational study included 10 patients scheduled for elective laparoscopic procedures under general anesthesia. After induction, the Baska mask was inserted, and number of attempts and ease of insertion were recorded. I.e, Easy insertion- insertion at first attempt with no resistance, Difficult insertion- insertion with resistance or at second attempt, and Failed insertion- insertion not possible even after two attempts. Hemodynamic parameters—heart rate, systolic, diastolic, and mean arterial pressures—were measured at baseline, during insertion, and at predefined intervals post-insertion.

Results

Successful first-attempt insertion occurred in 8 patients (80%), with 2 requiring a second attempt. Hemodynamic changes were mild and transient: heart rate increased from 82 ± 6 bpm to 88 ± 7 bpm, systolic blood pressure from 122 ± 10 mmHg to 128 ± 12 mmHg, and mean arterial pressure from 88 ± 8 mmHg to 92 ± 7 mmHg, returning near baseline within 5 minutes. No complications such as airway trauma or desaturation were observed.

Conclusion

In this small cohort, the Baska mask demonstrated high first-attempt success and stable hemodynamic response, supporting its use as a safe and effective airway device for laparoscopic surgeries.

Keywords

Baska Mask, supraglottic airway, laparoscopic surgery, case series

Date of Submission: 19-05-2026 Date of Acceptance: 29-05-2026

I. Introduction

Supraglottic airway devices (SAD) was introduced by Archie brain in 1988, which provides stable hemodynamics and decreased airway morbidity upon tracheal intubation.With development of each generation of SAD there is evolution of new safety features.[1]

The baska mask (BM) belongs to third generation supraglottic airway device, which is anatomically curved, made of silicone, with an esophageal drainage inlet, a tab to help negotiate the palatopharyngeal curve, an integrated bite block.[1]

With the advent and newer supraglottic airway devices and with advent in each generation, there has been development in design of the device in such a way as to improve the safety and minimize risk of operation. Hence, with the introduction of newer generation supraglottic airway devices, laparoscopic surgeries which once performed under general anesthesia with controlled ventilation using an endotracheal tube have been replaced by newer generation supraglottic airway devices. Thus avoiding the complications related to the endotracheal tube usage.[2]

II. Methods

Patients posted for laparoscopic surgeries with

Inclusion Criteria:

ASAphysical status I and II patients, Agebetween 18 to 60 years, weighing 30kg-70kg , Patients undergoing laparoscopic procedures, Patient willing to give informed consent

Exclusion Criteria:

Anticipated difficult airway- inadequate mouth opening, short neck, mallampati 3 or 4, Oropharyngeal pathology, Cervical Spine fractures, Known case of hiatus hernia patients

III. Methodology

After taking written/informed consent from patient meeting the criteria we shall insert baska mask size 3 if the patient is 30-50kg weight, size 4 if the patient is 50-70kg weight

After preanesthetic checkup, patients will be fasted after midnight. In operation theatre, standard monitors such as pulse oximetry(spo2), electrocardiography, non-invasive blood pressure monitoring and capnography will be attached and baseline parameters will be recorded.

After administering general anaesthesia as per standard Institutional practice, the anesthetist will open the patient mouth using right thumb and index finger held at the bite block toward hard palate, avoiding the tongue. Extended hand tab to control the flexion to help negotiate palatopharyngeal curve, pushed until definitive resistance felt.

We should assess the time taken for insertion of device. I.e, ease of insertion, I.e, 1. Easy insertion-insertion at first attempt with no resistance, 2. Difficult insertion-insertion with resistance or at second attempt, and 3. Failed insertion-insertion not possible even after two attempts.

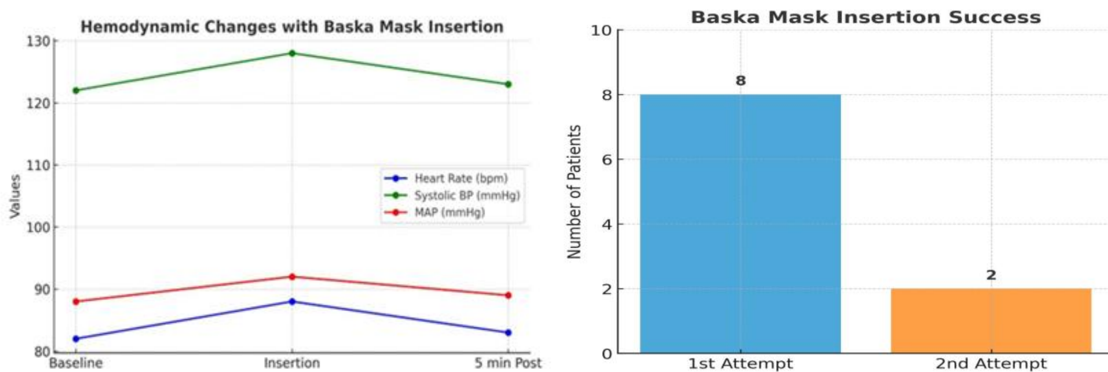
The hemodynamic responses (HR and MAP), Spo2 should also be recorded at 1min after induction (T1), 5min before carboperitonium(T2), 5min after carboperitonium(T3), 5min before removal of carboperitonium(T4) and 5min after removal of carboperitonium (T5) along with baseline (T0)valve. Incidence of gastric distension/desaturation/aspiration/cough /any lip,tongue and dental injury will be recorded.

IV. Results

Patient characteristics

Case No.	Age (years)	Sex	ASA	Procedure	Insertion Attempts	Intraoperative Events
1	36	F	I	Laparoscopic Cholecystectomy	1	Uneventful
2	42	M	II	Laparoscopic Appendectomy	1	Uneventful
3	39	F	I	Diagnostic Laparoscopy	2	Uneventful
4	50	F	II	Laparoscopic Hysterectomy	1	Uneventful
5	45	M	I	Laparoscopic Hernia Repair	1	Uneventful
6	33	F	I	Laparoscopic Ovarian Cystectomy	1	Uneventful
7	47	F	II	Laparoscopic Cholecystectomy	1	Uneventful
8	41	M	I	Laparoscopic Appendectomy	2	Uneventful
9	38	F	I	Laparoscopic Myomectomy	1	Uneventful
10	35	F	II	Laparoscopic Sterilization	1	Uneventful

Successful first-attempt insertion occurred in 8 patients (80%), with 2 requiring a second attempt. Hemodynamic changes were mild and transient: heart rate increased from 82 ± 6 bpm to 88 ± 7 bpm, systolic blood pressure from 122 ± 10 mmHg to 128 ± 12 mmHg, and mean arterial pressure from 88 ± 8 mmHg to 92 ± 7 mmHg, returning near baseline within 5 minutes. No complications such as airway trauma or desaturation were observed.



V. Discussion

This prospective case series demonstrates that the Baska Mask can be effectively used as a primary airway device in patients undergoing elective laparoscopic surgeries. In our cohort of 10 patients, we achieved an overall insertion success rate of 100%, with 80% successful on the first attempt. In a similar

comparison,Sharma et al. documented no significant difference in ease of insertion among Baska Mask, LMA Supreme, and i-gel (P > 0.05), which is more consistent with the non-significant result of the present study[7]. In contrast, Foo et al. reported that the LMA Supreme was significantly easier to insert than the Baska FESS mask[6]. Ventilation and oxygenation were maintained adequately throughout all procedures, and none of the cases required conversion to endotracheal intubation.

The hemodynamic response to device insertion was minimal, reflecting the non-invasive nature of supraglottic airway devices compared with tracheal intubation. A similar pattern observed by Sharma et al., who reported that heart rate remained comparable among Baska Mask, i-gel, and LMA Supreme groups at all intraoperative intervals[7]. Postoperative side effects were limited to mild sore throat in two patients, both of which resolved spontaneously within 48 hours. Importantly, no major complications such as aspiration, airway trauma, or desaturation were observed.

Our results are consistent with existing literature reporting that the Baska Mask provides satisfactory performance during laparoscopic procedures in selected patients. Previous studies have highlighted that while insertion can sometimes require repositioning or multiple attempts, overall clinical performance is generally reliable when the device is used by experienced operators. In our series, two patients required a second attempt, but ventilation was ultimately successful in all cases.

VI. Conclusion

In our series of 10 patients, the Baska Mask proved to be a safe and effective airway device for laparoscopic surgeries, with a high success rate of insertion and minimal postoperative complications. Its use avoided the need for endotracheal intubation in all cases, and ventilation was consistently adequate throughout surgery. While larger comparative studies are required to further define its role, our experience supports the Baska Mask as a viable option for elective laparoscopic procedures in appropriately selected patients.

Monitory benefits
Nil

Conflict of interest
There is no conflict

References

[1]. Choi SR, Kim J, Kim J, Et Al. Comparison Of Clinical Performance Of I-Gel® And Baska Mask® During Laparoscopic Cholecystectomy. Korean J Anesthesiol. 2019
[2]. Ng CC, Koh YY, Hussin AZ, Et Al. Baska Mask Versus Endotracheal Tube In Laparoscopic Cholecystectomy: A Randomized Trial. Anaesthesia And Intensive Care. 2021.
[3]. Miller DM. Third Generation Supraglottic Airways: Is A New Classification Needed?. BJA: British Journal Of Anaesthesia. 2015 Oct 1;115(4):634-5.
[4]. Benumof J. Benumof And Hagberg's Airway Management. Elsevier Health Sciences; 2012 Sep 24.
[5]. Almeida G, Costa AC, Machado HS. Supraglottic Airway Devices: A Review In A New Era Of Airway Management. J Anesth Clin Res. 2016;7(7):2.
[6]. Foo LL, Shariffuddin II, Chaw SH, Lee PK, Lee CE, Chen YS, Chan L. Randomized Comparison Of The Baska FESS Mask And The LMA Supreme In Different Head And Neck Positions. Expert Review Of Medical Devices. 2018 Aug 3;15(8):597-603.
[7]. Sharma P, Rai S, Tripathi M, Malviya D, Kumari S, Mishra S. Comparison Of LMA Supreme, I-Gel, And Baska Mask For Airway Management During Laparoscopic Cholecystectomy: A Prospective Randomized Comparative Study From North India. Anesthesia Essays And Researches. 2022 Jan 1;16(1):42-8.
[8]. Tortora GJ, Derrickson BH. Principles Of Anatomy And Physiology. John Wiley & Sons; 2018 May 15.
[9]. Alexiev V, Salim A, Kevin LG, Laffey JG. An Observational Study Of The Baska® Mask: A Novel Supraglottic Airway. Anaesthesia. 2012 Jun;67(6):6405.
[10]. Sorbello M, Petrini F. Supraglottic Airway Devices: The Search For The Best Insertion Technique Or The Time To Change Our Point Of View?. Turkish Journal Of Anaesthesiology And Reanimation. 2017 Apr 1;45(2):76.