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Comparative evaluation between oral gabapentin and oral pregabalin premedication for attenuation of hemodynamic surge to laryngoscopy and endotracheal intubation in elective procedures under general anesthesia

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ABSTRACT

Background: Effective attenuation of the sympathetic surge due to laryngoscopy and endotracheal intubation is needed. We wanted to compare the role of oral gabapentin (600 mg) and oral pregabalin (150 mg) in controlling this sympathetic surge. **Aims and Objectives:** To compare the role of oral gabapentin (600 mg) and oral pregabalin (150 mg) as premedications for attenuating hemodynamic surge to laryngoscopy and endotracheal intubation. **Materials and Methods:** 90 patients aged 18–45 years with ASA grade I or II posted for elective surgical procedure under general anesthesia were randomly allocated to two equal groups (45 in each group) to receive either 600 mg oral gabapentin or 150 mg oral pregabalin 1 h prior to surgery. Heart rate (HR), systolic blood pressure (SBP), diastolic blood pressure (DBP), mean arterial pressure (MAP), and rate pressure product (RPP) were recorded after intubation at 1 (T1), 3 (T3), 5 (T5), and 10 (T10) min. Post-operative sedation and post-operative nausea and vomiting (PONV) were recorded and compared. **Results:** Gabapentin attenuates hemodynamic surge in terms of HR, SBP, DBP, MAP, and RPP better than pregabalin during laryngoscopy and endotracheal intubation at 3, 5, and 10 min after intubation, while there was no significant difference between the two groups at 1 min after intubation. Post-operative sedation score and adverse effects like PONV and SpO_2 fluctuations at different points in time were comparable. **Conclusion:** Oral gabapentin (600 mg) was found to be more effective than oral pregabalin (150 mg) in attenuating the hemodynamic surge to laryngoscopy and intubation.

Key words: Gabapentin; General anesthesia; Hemodynamic surge; Intubation; Laryngoscopy; Pregabalin

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INTRODUCTION

It is well established that laryngoscopy and endotracheal intubation violate patients' protective airway reflexes and cause hemodynamic changes associated with increased heart rate (HR), increased blood pressure (BP), and occasional disturbances in cardiac rhythm invariably.[1,2] These hemodynamic alterations are hazardous to patients with hypertension, myocardial insufficiency, or cerebrovascular disease.[3] Various pharmacologic and nonpharmacologic methods have been tried to limit the pressor response following the insertion of an endotracheal tube.[4] Each method has its own merits and demerits, and the success rate has been variable in previous studies. This prospective, randomized, double-blind, controlled study aims to compare the efficacy of

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orally administered gabapentin and pregabalin to attenuate the hemodynamic surge to laryngoscopy and endotracheal intubation. This study also aims to compare the adverse effects like sedation using the Ramsay sedation scale,[5] post-operative nausea and vomiting (PONV), and SpO_2 fluctuations.

A previous study by Kaur et al.,[6] showed that oral pregabalin (150 mg) provided more pronounced sedation and anxiolysis than oral clonidine (200 μg). Both clonidine and pregabalin are effective oral premedication drugs for attenuation of the pressor response to laryngoscopy and endotracheal intubation. Waikar et al.,[7] also performed a study using Pregabalin 150 mg, gabapentin 900 mg, and clonidine 200 μg, where it was concluded that all three drugs provided better sedation and anxiolysis if given orally before operation, and further attenuation of the pressor response for orotracheal intubation by pregabalin was fairly better than gabapentin and clonidine. Saman et al.,[8] showed that oral pregabalin premedication at a dose of 150 mg 1 h before surgery attenuated early hemodynamic changes associated with laryngoscopy and endotracheal intubation, while Singh et al.,[9] concluded that pregabalin 150 mg seemed to be an effective and safe drug for anxiolysis, analgesia, and hemodynamic stability during laryngoscopy and intubation and can be useful for patients with comorbid conditions preoperatively.

Two studies, one by Kiran and Verma[10] using 800 mg gabapentin and another by Fassoulaki et al.,[11] using 1600 mg gabapentin, showed that both the different doses of gabapentin attenuated the pressor response associated with laryngoscopy and tracheal intubation, but the tachycardiac response was not completely attenuated. Namratha and Shobha[12] performed a prospective, randomized, double-blind, placebo-controlled study using 800 mg gabapentin and 150 mg pregabalin orally. It was concluded that compared to gabapentin and pregabalin, there was a significant increase in Heart rate (HR) and mean arterial pressure (MAP) in the control group after laryngoscopy and tracheal intubation. Pregabalin, being more sedative than gabapentin, is better than gabapentin at suppressing the pressor response.

Therefore, more studies are needed to compare oral gabapentin and oral pregabalin in attenuating the hemodynamic surge witnessed during laryngoscopy and intubation of the patient. This study was conducted to compare the efficacy of a lower dose of gabapentin (600 mg) and oral pregabalin (150 mg) for attenuating the adverse hemodynamic surge response to laryngoscopy and endotracheal intubation. Adverse effects like SpO_2 fluctuations, sedation, and PONV were also studied. Randomization and double-blinding were also ensured.

Aims and objectives

The study was conducted with the aim to evaluate and compare the effects of oral gabapentin (600 mg) and oral Pregabalin (150 mg) pre-medications on hemodynamic changes, with the following specific objectives

- To assess hemodynamic changes during laryngoscopy and endotracheal intubation
- To evaluate the associated adverse effects perioperatively
- To evaluate sedation post-operatively.

MATERIALS AND METHODS

The present study was carried out after obtaining approval from the Institute's Ethics Committee in a tertiary care center in West Bengal. Ninety patients between the ages of 18–45 years of either sex conforming to American Society of Anesthesiologists (ASA) grade I or II posted for elective surgical procedure, under general anesthesia (GA) were included in the study. After a thorough preoperative evaluation, written informed consent was taken from all patients.

Inclusion criteria

The inclusion criteria for the current study were as follows: Patients of either sex aged between 18 and 45 years, patients with ASA grade I or II, and patients who were admitted to undergo elective surgical procedures under GA.

Exclusion criteria

Patients with a history of severe cardiovascular diseases (including hypertension, coronary artery disease, and ischaemic heart disease), respiratory diseases, renal diseases, hepatic diseases, allergies to gabapentin or pregabalin, patients on beta blocker therapy or alpha-2 agonist therapy, patients with anticipated difficult airways (Mallampati≥III), patients requiring laryngoscopy and intubation time >30 s or requiring more than two attempts were excluded from the study. Other exclusion criteria were participation in any other clinical trial within the past 1 month and any other condition placing the subject at high risk or unfit for the trial.

A pre-anesthetic checkup was performed, and relevant histories along with informed consent from the patients were taken. Patients were advised to fast for 10 h before surgery. After arrival in the preoperative room the patient's identity and informed consent form were checked, and all required monitors were attached. Baseline (pre-medication) values of the study parameters (hear rate [HR], systolic blood pressure [SBP], diastolic blood pressure [DBP], and mean arterial pressure [MAP], rate pressure product [RPP]) were noted.

Then the random allocation of patients was done by supplying study drugs to the patients in a sealed envelope in powdered form 1 h before intubation to ensure proper

blinding. The anesthesiologist conducted the procedures randomly. A total of 90 adult patients were randomly allocated into two equal groups (n=45 in each group). Group G patients received a single dose of 600 mg oral Gabapentin, and group P patients received a single dose of 150 mg oral Pregabalin 1 h before intubation.

On arrival in OT, again all the preinduction parameters (HR, SBP, DBP, MAP, RPP, and SpO_2) were noted. Sedation was also assessed in the preinduction phase and compared between the two groups using the Ramsay sedation scale,[5] which states that score 1 is "awake; agitated or restless or both;" and score 2 is "awake; cooperative, oriented, and tranquil;" score 3 is "awake but responds to commands only; score 4 is "asleep; brisk response to light glabellar tap or loud auditory stimulus;" score 5 is "asleep; sluggish response to a light glabellar tap or loud auditory stimulus" and score 6 is "asleep; no response to glabellar tap or loud auditory stimulus." Then the patients were administered injection fentanyl (2 mg/kg i.v.), injection ranitidine (50 mg i.v.), and injection ondansetron (8 mg i.v.). Preoxygenation for 3 min using the Bain circuit with a gas flow rate of 10 L/min with 100% oxygen was done, which was followed by induction of anesthesia with injection propofol (2 mg/kg I.V.). Laryngoscopy (using a macintosh laryngoscope) and intubation with a cuffed endotracheal tube of appropriate size were facilitated with injection atracurium (0.5 mg/kg I.V.).

Maintenance of anesthesia was done with 40% of O_2 and 60% of N_2O, sevoflurane inhalation (0.8–1.2%), and muscle relaxation was achieved with atracurium in titrated and repeated top-up doses as per requirement. All patients were monitored and HR, SBP, DBP, MAP and RPP were recorded after intubation at 1 min (T1), 3 min (T3), 5 min (T5), and 10 min (T10). Ventilation was mechanically controlled and adjusted to control end tidal CO_2 concentration at 30–35 mmHg. At the end of the operation, residual neuromuscular blockage was antagonized with neostigmine (50 mcg/kg i.v.) and glycopyrrolate (0.01 mg/kg i.v.). Extubation was done only after suction of the oropharynx, and adequate reversal from GA was judged on a clinical basis. Post-operative sedation score and SpO_2 fluctuations were noted. Any episode of PONV was also noted.

Patients were sent to the respective postoperative wards for monitoring, and 100% of O_2 at 2 L/min was given with nasal prongs for 2 h. Postoperative pain was treated with Diclofenac sodium (75 mg i.m.) thrice daily. In addition, a paracetamol infusion (1000 mg i.v.) was used if additional analgesia was needed.

The results of the observations thus obtained in each group of patients were tabulated, compiled, and statistically analyzed using IBM SPSS Statistics version 17 (Lllinois, Chicago: SPSS Inc., 2008) and Statistical version 6 (Tuba, Oklahoma: StatSoft Inc.; 2001) software. A $P<0.05$ was considered statistically significant, and <0.01 was considered highly significant.

RESULTS

The study spanned from January 2021 to January 2022, including 90 patients (45 in each group). Data from ninety patients was analyzed.

Table 1 shows that the groups were statistically comparable with respect to demographic variables like sex, age, body mass index (BMI), and ASA grading, and there were no statistically significant differences.

All operative procedures were elective abdominal surgeries, including open cholecystectomy, open nephrectomy, total abdominal hysterectomy±bilateral salpingo-oopherectomy, appendicectomy, hernia repair, myomectomy, mastectomy, gastectomy, and ovarian cystectomy. All these procedures were performed under GA, and both the premedicating drugs were used.

Table 2 shows a comparison of baseline HRs, pre-induction HRs, and HRs at 1, 3, 5, and 10 min after intubation in each group. When the baseline HRs and pre-induction HRs

Table 1: Comparison of demographic variables between the study groups

Demographic variables	Group gabapentin	Group pregabalin	P-value	Remark
Age (years) (mean±SD)	39.7±1.34	39.6±1.42	0.65	NS
Sex (M: F)	23:22	24:21	0.83	NS
Body mass index (mean±SD)	21.4±0.65	21.6±0.8	0.12	NS
ASA grade (I: II)	23:22	24:21	0.83	NS

SD: Standard deviation, Independent sample t-test was used and P<0.05 was considered statistically significant, NS: Not significant, ASA: American Society of Anesthesiologist

Table 2: Comparison of heart rates between the two groups

Time	Group gabapentin	Group pregabalin	P-value	Remarks
Baseline	78.7±11.7	81.2±10.8	0.28	NS
Pre-induction	78.7±11.5	81.2±10.9	0.28	NS
1 min	83.7±11.1	86.5±10.6	0.10	NS
3 min	78.2	84.7±10.4	0.02	S
5 min	77.4±11.7	88.4±9.7	<0.01	S
10 min	74.8±11.4	88.4±9.7	<0.01	S

Data were expressed as mean±standard deviation and tested with Mann Whitney U test or Independent Sample t-test wherever applicable, S: Significant, NS: Not significant, P<0.05 was considered statistically significant

were compared between the groups, no statistically significant difference was found. There was no statistical difference in HR at 1 min after intubation among the two groups. However the HR at 3, 5, and 10 min after intubation were significantly lower in gabapentin compared to pregabalin, and there was a significant statistical difference between the two groups.

Table 3 shows comparisons of baseline SBP, pre-induction SBP, and SBP at 1, 3, 5, and 10 min after intubation in each group. When the baseline, pre-induction SBP, and SBP at 1 min after intubation were compared between the groups, no statistically significant difference was found. The SBP at 3, 5, and 10 min after intubation was significantly lower with gabapentin compared to pregabalin.

Table 4 shows comparisons of baseline DBP, pre-induction DBP, and DBP at 1, 3, 5, and 10 min after intubation in each group. The baseline and pre-induction DBP were compared between the groups; no statistically significant difference was found. Furthermore, no significant difference was noted in the DBP at 1 min after intubation in the two groups. The DBP at 3, 5, and 10 min after intubation was significantly lower with gabapentin compared to pregabalin, and the difference was statistically significant.

Table 5 shows the comparison of baseline MAP, pre-induction MAP, and MAP at 1, 3, 5, and 10 min after intubation in each group. The baseline, pre-induction MAP, and MAP at 1 min after intubation were compared between the groups; no statistically significant difference was found. However, MAP at 3, 5, and 10 min after intubation was significantly lower in the gabapentin group compared to the pregabalin group, and the difference was statistically significant.

Table 6 shows the comparison of baseline RPP, pre-induction RPP, and RPP at 1, 3, 5, and 10 min after intubation in each group. The baseline, pre-induction RPP, and RPP at 1 min after intubation were compared between the groups; no statistically significant difference was found. However, RPP at 3, 5, and 10 min after intubation were significantly lower in the gabapentin group compared to the pregabalin group.

There were certain complications observed such as sedation, PONV, and SpO_2 fluctuations, among the patients included in the study. During pre-induction, 1 patient in group gabapentin and 1 patient in group pregabalin had a Ramsay sedation score of ≥3. By using an independent sample t test, there was no statistically significant ($P>0.05$) difference in the sedation score between the two groups. Post-extubation, 2 patients in group gabapentin and 3 patients in group pregabalin had a ramsay sedation score of ≥3. By using an independent sample t-test, the P-value was 0.44, which was statistically not significant.

Table 3: Comparison of systolic blood pressures between the two groups

Time	Group gabapentin	Group pregabalin	P-value	Remarks
Baseline	118.4±10.2	118.5±9.6	0.99	NS
Pre-induction	117.8±10.2	117.8±9.8	0.82	NS
1 min	116.1±8.3	119.4±9.4	0.08	NS
3 min	112.4±8.9	119.1±9.4	<0.01	S
5 min	108.7±8.7	115.4±9.3	<0.01	S
10 min	106±8.2	117.8±9.7	<0.01	S

Data were expressed as mean±standard deviation and tested with Mann Whitney U test or Independent Sample t-test wherever applicable, S: Significant, NS: Not significant, P<0.05 was considered statistically significant

Table 4: Comparison of diastolic blood pressures between the two groups

Time	Group gabapentin	Group pregabalin	P-value	Remark
Baseline	71.5±7.6	70.6±6.2	0.69	NS
Pre-induction	71±7.4	70.7±7.1	0.77	NS
1 min	66.3±6.6	66.4±5.7	0.78	NS
3 min	62.9±6.2	65.2±5.8	0.02	S
5 min	59±6.4	64.7±6.4	<0.01	S
10 min	57.5±6.1	72.7±6.1	<0.01	S

Data was expressed as mean±standard deviation and tested with Mann Whitney U test or Independent Sample t-test wherever applicable, S: Significant, NS: Not significant, P<0.05 was considered statistically significant

Table 5: Comparison of mean arterial pressure between the groups

Time	Group gabapentin	Group pregabalin	P-value	Remark
Baseline	87.2±8.3	86.6±7.1	0.80	NS
Pre-induction	86.8±8.3	86.4±7.8	0.81	NS
1 min	82.9±6.9	84.1±6.7	0.46	NS
3 min	79.5±6.9	83.2±6.6	0.04	S
5 min	75.5±7	81.6±6.4	<0.01	S
10 min	73.6±6.5	87.8±6.4	<0.01	S

Data were expressed as mean±standard deviation and tested with Mann Whitney U test or Independent Sample t-test wherever applicable, S: Significant, NS: Not significant, P<0.05 was considered statistically significant

Table 6: Comparison of rate pressure product between the two groups

Time	Group gabapentin	Group pregabalin	P-value	Remark
Baseline	9370.5±1882	9616.8±1464	0.37	NS
Pre-induction	9357.2±1863	9559.1±1464.8	0.56	NS
1 min	9729.3±1565.2	10324.8±1453	0.06	NS
3 min	8803.1±1530.3	10097.4±1464.3	<0.01	S
5 min	8426.1±1526.9	9845.8±1310.8	<0.01	S
10 min	7940.6±1447.5	10417.2±1344.2	<0.01	S

Data were expressed as mean±standard deviation and tested with Mann Whitney U test or Independent Sample t-test wherever applicable, S: Significant, NS: Not significant, P<0.05 was considered statistically significant

Among 90 patients, 3 patients in group gabapentin and 2 patients in group pregabalin experienced nausea post-operatively. By using the chi-square test, the P-value was found to be 0.65, which was statistically insignificant. We also observed that 3 patients in Group gabapentin and 2 patients in group pregabalin experienced vomiting once post-operatively. The P-value was found to be 0.65, which was statistically insignificant. It was observed that during pre-induction, 4 patients in group gabapentin and 3 patients in group Pregabalin had some SpO_2 fluctuation (SpO_2<95%). By using an independent sample t-test, there was no statistically significant difference observed. During post-extubation, 2 patients in group gabapentin and 4 patients in group pregabalin had SpO_2 fluctuations. By using an independent sample t-test, the p value was 0.56, which was statistically not significant.

DISCUSSION

Effective attenuation of the hemodynamic response to laryngoscopy and tracheal intubation is of great importance in the prevention of perioperative morbidity and mortality. The factors influencing the cardiovascular changes associated with laryngoscopy and intubation are age, drugs, type and duration of procedures, depth of anesthesia, hypoxia, and hypercarbia. Variations in HR due to stressful events decrease with increasing age. Young patients show more extreme changes.[13] Marked fluctuations in hemodynamic response have also been reported in geriatric patients.[14,15] Therefore, patients with an optimal age range of 18–45 years were selected for this study. Difficult intubation takes a longer time and is invariably associated with marked hemodynamic change, even in well pre-medicated patients. Hence, patients with higher mallampati classes (III and IV) were excluded from this study. The most significant factor influencing cardiovascular responses is the duration of laryngoscopy.[16] The force applied during laryngoscopy has only a minor effect. In this study, the durations of laryngoscopy and intubation were limited to <30 s. During laryngoscopy, an adequate depth of anesthesia was maintained, avoiding hypoxia and hypercarbia.

This prospective randomized double-blinded comparative study was undertaken to compare the usefulness of two drugs, oral gabapentin (600 mg) and oral pregabalin (150 mg), in attenuation of the hemodynamic surge response following laryngoscopy and endotracheal intubation.

When the baseline HRs (group gabapentin=78.7±11.7; group pregabalin=81.2±10.8) and pre-induction HRs (group gabapentin=78.7±11.5; group pregabalin=81.2±10.9) were compared between the groups, no statistically significant difference was found (P=0.28 in each). There was no statistical difference in HR at 1 min after intubation among the two groups (group gabapentin=83.7±11.1; group pregabalin=86.5±10.6; P=0.10). However, the HR at 3, 5, and 10 min after intubation was significantly lower in the gabapentin group compared to the pregabalin group. There was a significant statistical difference in HR among the two groups at 3 min (78.2±11.1 vs. 84.7±10.4, P=0.02). While HRs at 5 min and 10 min were comparatively lower in the gabapentin group (77.4±11.7; 74.8±11.4, respectively) compared to the pregabalin group (88.4±9.7; 88.4±9.7, respectively). The difference in values at 5 and 10 min after intubation was significant statistically (P<0.05 in each).

When the baseline SBP (group gabapentin=118.4±10.2; group pregabalin=118.5±9.6), pre-induction SBP (group gabapentin=117.8±10.2; group pregabalin=117.8±9.8), and SBP at 1 min (group gabapentin=116.1±8.3; group pregabalin=119.4±9.4) after intubation were compared between the groups, no statistically significant difference was found (P=0.99; 0.82; 0.08, respectively). The SBP at 3, 5, and 10 min after intubation were significantly lower in gabapentin (112.4±8.9; 108.7±8.7; 106±8.2, respectively) compared to pregabalin (119.1±9.4; 115.4±9.3; 117.8±9.7, respectively), and there was a significant statistical difference noted among the values in both groups (P<0.05 in each case).

The baseline DBP (group gabapentin=71.5±7.6; group pregabalin=70.6±6.2), pre-induction DBP (group gabapentin=71±7.4; group pregabalin=70.7±7.1), and DBP at 1 min (group gabapentin=66.3±6.3; group pregabalin=66.4±5.7) were compared between the groups, and no statistically significant difference was found (P=0.69; 0.77; 0.78, respectively). The DBP at 3 min after intubation were significantly lower in gabapentin (62.9±6.2) compared to pregabalin (65.2±5.8), and the difference was statistically significant (P=0.02). The DBP at 5 and 10 min after intubation were significantly lower in gabapentin (59±6.4; 57.5±6.1, respectively) compared to pregabalin (64.7±6.4; 72.7±6.1, respectively), and the difference was statistically significant (P<0.05 in each).

The baseline MAP (group gabapentin=87.2±8.3; group pregabalin=86.6±7.1), pre-induction MAP (group gabapentin=86.8±8.3; group pregabalin=86.4±7.8), and MAP at 1 min (group gabapentin=82.9±6.9; group pregabalin=84.1±6.7) after intubation were compared between the groups, and no statistically significant difference was found (P=0.80; 0.81; 0.46, respectively). However, MAP at 3 min after intubation was significantly lower in the gabapentin group (79.5±6.9) compared to the pregabalin group (83.2±6.6), and the difference was

statistically significant (P=0.04). The values of MAP at 5 and 10 min post-intubation were lower in the gabapentin group (75.5±7; 73.6±6.5, respectively) compared to the pregabalin group (81.6±6.4; 87.8±6.4, respectively) and showed a significant statistical difference (P<0.05 in each).

The baseline RPP (group gabapentin=9370.5±1882; group pregabalin=9616.8±1464), pre-induction RPP values (group gabapentin=9357.2±1863; group pregabalin=9559.1±1464.8), and RPP values at 1 min (group gabapentin=9729.3±1565.2; group pregabalin=10324.8±1453) after intubation were compared; no statistically significant difference was found (P=0.37; 0.56; 0.06, respectively). However, RPP at 3, 5, and 10 min after intubation were significantly lower in the gabapentin (8803.1±1530.3; 8426.1±1526.9; 7940.6±1447.5, respectively) compared to the pregabalin group (10097.4±1464.3; 9845.8±1310.8; 10417.2±1344.2, respectively), and the difference was highly significant statistically (P<0.01 in each).

As per our study, gabapentin (600 mg) is more effective in lowering HR, SBP, DBP, MAP, and RPP than pregabalin (150 mg) in the post-intubation period. A study by Sundar et al.,[17] showed that 150 mg oral pregabalin attenuated the pressor response (SBP, DBP, MAP) to tracheal intubation significantly as compared to placebo when compared for hemodynamic changes before the start of the surgery, after induction, and at 1, 3, and 5 min after intubation. According to a study by Ramsay et al.,[18] pregabalin blunts cardiovascular responses to laryngoscopy and tracheal intubation. As per the study by Fassoulaki et al.,[11] gabapentin 1600 mg capsules, when compared to placebo, attenuated the pressor response associated with laryngoscopy and tracheal intubation, such as systolic and diastolic arterial BPs and HR at 0, 1, 3, 5, and 10 min after tracheal intubation. Memis et al.,[19] also reported complete attenuation of reflex increases in HR and MAP after laryngoscopy and intubation with 600 mg gabapentin given 1 h before surgery.

In a study by Chethanananda et al.,[20] a total of 70 normotensive adult patients aged 20–50 years with ASA grades I and II of both genders were randomized into two groups (n=35 each). One group received oral gabapentin 600 mg, while another received oral pregabalin 150 mg 1 h prior to induction. On comparison, it was observed that all the hemodynamic parameters were maintained within 20% of baseline values throughout the study period. There was no statistically significant difference in MAP between the two groups, contrary to what was noted in our study.

However, during pre-induction, 1 patient of group gabapentin and 1 patient of group pregabalin, and during post-extubation, 2 patients of group gabapentin and 3 patients of group pregabalin had a Ramsay sedation score ≥3 with no statistically significant difference in sedation score. There were 3 patients in group gabapentin and 2 patients in group pregabalin who experienced nausea post-operatively. Post-extubation, 2 patients in group gabapentin and 4 patients in group pregabalin had Sp02 fluctuations. These adverse effects were transient and benign. There was no significant difference among the two groups regarding the occurrence of these adverse effects. No other complications were seen in this study.

Limitations of the study

The current study included only ASA I and II patients. The safety profile of the drugs in patients with other co-morbidities were not studied. The sedation score partially depends on the psychological status of each patient.

CONCLUSION

This prospective, randomized, comparative double-blinded study showed that Gabapentin 600 mg attenuates hemodynamic surge response in terms of HR, SBP, DBP, MAP, and RPP better than pregabalin 150 mg during laryngoscopy and endotracheal intubation. Both the study drugs showed comparable adverse effect profiles and were found to be safe.

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