Section: Anesthesia

Original Research Article

A STUDY TO COMPARE PRE-EMPTIVE ORAL GABAPENTIN AND PREGABALIN FOR POST-OPERATIVE PAIN IN ABDOMINAL HYSTERECTOMY IN TERTIARY CARE CENTRE TELANGANA

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ABSTRACT

Background: To study and compare the analgesic efficacy of oral Gabapentin and oral Pregabalin for postoperative pain in patients undergoing abdominal hysterectomy and to assess the incidence of adverse effects of Gabapentin and Pregabalin.

Materials and Methods: This is a cross sectional study to compare the effects of pregabalin and gabapentin, as pre-emptive medication before abdominal hysterectomy, for post-operative analgesia. In this study 60 patients undergoing abdominal hysterectomy surgery under spinal anaesthesia were randomized and divided into 2 groups, Group P and Group G. Postoperatively patients were monitored for pain scores by VAS scale, total analgesic requirement, and side effects up to 24 hours. The data obtained was analyzed.

Results: Group P patients received 300mg tablets of Pregabalin orally, Group G received 900mg tablets of Gabapentin two hours before surgery. Standard anaesthetic technique was followed in all patients. Patients were observed at 0 hr,2,4,8,12 and 24 hrs post-surgery. Post-operative pain scores (VAS Score) were significantly less in Group P compared to Group G patients. Time of first rescue analgesic was significantly prolonged in Group P patients (178.80 ± 12.53 mins) compared to Group G (168.90 ± 15.40 mins). Mean Tramadol dose (mg) in Gabapentin Group was 263.33 ± 31.984 and in Pregabalin Group was 245.00 ± 37.943. There was significant difference in mean Tramadol dose comparison between two groups. Gabapentin group required higher Tramadol compared to Pregabalin group. The incidence of side effects like nausea, vomiting, dizziness was found to statistically not significant between the two groups. There was no significant difference between the sedation scores between the Group P and Group G patients.

Conclusion: Pregabalin (300mg) provides prolonged pain relief compared to Gabapentin(900mg) in the post-operative period. Pregabalin is found to have superior efficacy with respect to quality and duration of analgesia.

Keywords: Gabapentin, Pregabalin, Post-Operative Pain.

INTRODUCTION

Post-operative pain is one of the most feared problem among patients coming for surgery. International association for study of pain defines pain as “An unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage”. Post-operative pain is caused by Inflammation from tissue trauma caused by surgical incision, dissection of tissues and burns due to use of cautery and Direct nerve injury caused by nerve transection, stretching or compression. Pain following hysterectomy is often multifactorial produced from different sources. Pain

arises from incisional site, deeper visceral structures and pain on movement such as during straining, coughing or mobilization may be severe.

Inadequately treated post-operative pain may have various systemic implications on the patient such as tachycardia, hypertension, increased blood glucose, delayed wound healing and anxiety. Anxiety leads to a surge of catecholamines due to the stress response leading to tachycardia, hypertension and hemodynamic instability. Therefore, the relationship between anxiety and pain is well established. In fact, pain has been described as one of the causes for delayed discharge from the hospital after ambulatory surgery along with drowsiness and nausea/vomiting. Depression, psychological stress and late recovery are related to chronic post- surgical pain.

Goals of postoperative pain management to optimize patient recovery and reduce hospital length of patient. To minimize the physiological stress response caused by pain and to minimize the development of chronic pain syndromes related to surgical procedures. Major goal of postoperative pain management is to minimize the dose of medication, to lessen the side effects and providing adequate analgesia. This can be achieved by multimodal approach to pain management.

MATERIALS AND METHODS

A. For pain- Visual Analogue Score

B. For adverse effects -Nausea, vomiting, dizziness, Ramsay sedation score

It is a Cross Sectional Study in 60 patients fulfilling the inclusion criteria undergoing abdominal hysterectomy surgeries for a period of 18-24 months in Tertiary Care Center, Telangana.

Inclusion Criteria: Age group of 35-65 years of age of both genders with american society of anaesthesiologists physical status I and II patients posted for elective abdominal hysterectomy.

Exclusion Criteria: History of allergy to gabapentin and pregabalin, History of drug and /or alcohol abuse, Patients who have been prescribed pregabalin or gabapentin for other indications, History of chronic pain and chronic daily intake of analgesics, History of epilepsy and other neurological disorders, Breast feeding mothers, Liver or renal disease and Patients with uncontrolled or labile hypertension.

All the patients were thoroughly examined on the day prior to surgery and on the day of surgery pre-operative assessment sheet was checked. The height, weight, body mass index of the patient was measured. The airway assessment, spine examination, and the nutritional status of the patient were evaluated. A detailed general and systemic examination was done. Preoperative investigations like Complete blood picture, Random blood sugar, Blood grouping and typing, ECG, CXR, Renal and Liver function tests, Viral markers like HIV and HbsAg and other investigations depending on the history and co-morbid conditions of the patient were evaluated properly.

Patients are randomly allocated into two groups: Group G (Gabapentin group) who will be receiving 900mg gabapentin and Group P (Pregabalin group) who will be receiving 300mg of Pregabalin two hours before surgery. Following approval of the Institutional Ethics Committee, written informed consent was obtained from patients prior to procedure. A proforma was designed to assess the post-operative analgesia in these patients. They will be informed preoperatively about the Visual analogue score and will be assessed post operatively. Preanaesthetic checkup was done one day prior to the surgery. Patients were evaluated for any systemic diseases and laboratory investigations recorded. The procedure of SAB was explained to the patients and written consent was obtained. The patients were educated about the use of visual analogue scale. Preparation of patients included period of overnight fasting.

Boyles anaesthesia machine was checked. Appropriate size endotracheal tubes, working laryngoscope with medium and large size blades, stylet and working suction apparatus were kept ready before the procedure. Resuscitation equipment and emergency drug tray consisting of atropine, adrenaline, mephenteramine, ephedrine, dopamine were kept ready.

Patients satisfying inclusion criteria were randomly allocated by closed envelope method into two groups of 30 each: Group P (Pregabalin group), Group G (gabapentin group). Patients in Group P received 300 mg of Pregabalin orally, Group G received Gabapentin 900 mg orally with sips of water two hours before surgery. All patients were premedicated with Inj.Ranitidine 50 mg and metoclopramide 10 mg intravenously one hour before surgery.

Inside the operating room, standard ASA monitors (ECG, NIBP, Pulse oximeter) were connected. Bladder was catheterized to monitor urine output. Intravenous access established with 18G cannula. All patients were preloaded with 10ml/kg of Ringer's lactate solution. Under strict aseptic precautions, 3.5ml of hyperbaric solution of 0.5% bupivacaine with 25mcg of Inj Fentanyl was given in lumbar subarachnoid space using 25 Gauge Quincke needle. The level of spinal anaesthesia was checked and surgery was started after achieving T6 level. Hypotension, defined as systolic blood pressure below the 20% of baseline value or value below 90 mmHg, was treated with Inj. Mephentermine (3 mg bolus) I.V. Bradycardia, defined as heart rate below the 20% of baseline value or rate below 50/min, was treated with Inj. Atropine 0.6 mg I.V

At the end of surgery, patients were shifted to ward. VAS scores were assessed in the immediate postoperative period (0hr) and at 2, 4, 8,12 and 24 hours post operatively.

Patients were given Inj.Tramadol 2mg/kg intravenously when the VAS score was 4 or greater.

Dosage did not exceed 250 mg at one time and 600 mg per day.

Time since spinal anaesthesia to first requirement of analgesic (T1), Total analgesic requirement in first 24 hours, VAS scores, Ramsay sedation score, side effects of the drug like dizziness, nausea, vomiting were recorded in first 24 hours postoperatively.

Data was entered into Microsoft excel data sheet and was analyzed using SPSS 22 version software. Categorical data was represented in the form of Frequencies and proportions. Chi-square test or Fischer's exact test (for 2x2 tables only) was used as test of significance for qualitative data.

Continuous data was represented as mean and standard deviation. Independent t test or Mann Whitney U test was used as test of significance to identify the mean difference between two quantitative variables and qualitative variables respectively.

Graphical representation was done using bar diagram and line diagram.

p value (Probability that the result is true) of <0.05 was considered as statistically significant after assuming all the rules of statistical tests.

Statistical software: MS Excel, SPSS version 22 (IBM SPSS Statistics, Somers NY, USA) was used to analyze data.

RESULTS

Sixty patients posted for Abdominal hysterectomy surgeries of ASA I & II were taken up for the study. They were allocated randomly in a single - blind fashion into two groups in equal number of 30 each. Group G (Gabapentin) received 900mg tablet of Gabapentin, Group P (Pregabalin) received 300mg tablet of Pregabalin 120 minutes (2 hours) prior to anaesthesia. A standard anaesthetic technique was followed in all patients. The patients were assessed by an observer in the postoperative period who was blinded for the group.

There was no significant difference in mean Age, height and weight comparison between two groups(p>0.05). [Table 1]

In Gabapentin Group, 76.67% had 1 and 23.33% had 2. In Pregabalin Group, 60% had 1 and 40% had 2. [Table 2]

There was no significant difference in ASA Distribution between two groups.

Mean Duration in Gabapentin Group was 126 ± 14.03 and in Pregabalin Group was 124.5 ± 14.96. There was no significant difference in mean Duration comparison between two groups. [Table 3]

Mean Time of analgesic in Gabapentin Group was 168.90 ± 15.40 and in Pregabalin Group was 178.80 ± 12.53. There was significant difference in mean Time of analgesic comparison between two groups. Pregabalin provided more prolonged pain relief compared to Gabapentin.

Postoperative analgesia was provided with intravenous tramadol for all patients. Initial dose of tramadol is 2mg/kg intravenously, when patient's VAS score is 4 or more. Subsequently tramadol was given at a dose of 2 mg/kg when the VAS score was 4 or more, or on patient's demand. Care was taken not to exceed the limit of 250mg/dose and 600mg/day. Total dosage of Tramadol required for each patient during postoperative period upto 24 hours was calculated.

Mean Tramadol dose in Gabapentin Group was 263.33 ± 31.984 and in Pregabalin Group was 245.00 ± 37.943. There was significant difference in mean Tramadol dose comparison between two groups. Gabapentin group required higher Tramadol compared to Pregabalin group. [Table 4]

There was significant difference in Mean VAS scores comparison between two groups from 2 hrs to 24 hrs. VAS Scores were significantly low in Pregabalin group compared to Gabapentin group. [Table 5]

There was no significant difference in Ramsay sedation score between two groups at all the intervals of follow-up. [Table 6]

In Gabapentin Group, 13.33% had nausea, 13.33% had vomiting and 23.33% had Dizziness.

In Pregabalin Group, 16.67% had nausea, 16.67% had vomiting and 20.00% had Dizziness.

There was no significant difference in side effects distribution between two groups. [Table 7

Table 1: Mean Age comparison between two groups

	Group				p value
	Gabapentin		Pregabalin		
	Mean	SD	Mean	SD	
Age	56.80	7.75	53.27	8.22	0.092
Height	162.77	9.04	159.50	5.93	0.103
Weight	65.83	9.15	64.63	8.76	0.606

Table 2: ASA Distribution between two groups

		Group			
		Gabapentin		Pregabalin	
		Count	%	Count	%
ASA	1	23	76.67%	18	60.00%
	2	7	23.33%	12	40.00%

Table 3: Mean Duration and Time of analgesic comparison between two groups

	Group				p value
	Gabapentin		Pregabalin		
	Mean	SD	Mean	SD	
Duration	126.00	14.03	124.50	14.96	0.690
Time of analgesic	168.90	15.406	178.80	12.535	0.008*

Table 4: Mean Tramadol dose comparison between two groups

	Group				p value
	Gabapentin		Pregabalin		
	Mean	SD	Mean	SD	
Tramadol dose	263.33	31.984	240.00	33.21	0.048*

Table 5: VAS Score comparison between two groups at different intervals of time

VAS	Group						p value
	Gabapentin			Pregabalin			
	Mean	SD	Median	Mean	SD	Median	
0 hrs	1.00	0.00	1	1.00	0.00	1	-
2 hrs	3.53	1.31	3	2.53	1.17	2	0.268
4 hrs	4.60	0.93	5	4.00	0.87	4	0.674
8 hrs	3.67	0.71	4	3.13	0.82	3	0.763
12 hrs	3.23	0.86	3	2.50	0.51	3	< 0.001*
24 hrs	2.87	0.68	3	1.87	0.63	2	< 0.001*

Table 6: Mean Ramsay sedation score comparison between two groups at different intervals of time

Ramsay sedation score	Group						p value
	Gabapentin			Pregabalin			
	Mean	SD	Median	Mean	SD	Median	
0 hrs	2.00	0.00	2	2.00	0.00	2	-
1 hr	2.13	0.35	2	2.20	0.41	2	0.497
2 hrs	2.23	0.43	2	2.17	0.38	2	0.527
4 hrs	2.23	0.43	2	2.30	0.47	2	0.567
6 hrs	2.23	0.43	2	2.20	0.41	2	0.759
12 hrs	2.23	0.43	2	2.13	0.35	2	0.325
24 hrs	2.20	0.41	2	2.20	0.41	2	1.000

Table 7: Side Effects Distribution between two groups

Side Effects		Group				p value
		Gabapentin		Pregabalin		
		Count	%	Count	%	
Nausea	Absent	26	86.67%	25	83.33%	0.718
	Present	4	13.33%	5	16.67%	
Vomiting	Absent	26	86.67%	25	83.33%	0.718
	Present	4	13.33%	5	16.67%	
Dizziness	Absent	23	76.67%	24	80.00%	0.754
	Present	7	23.33%	6	20.00%	

DISCUSSION

Post-operative pain is the reason for several complications like delayed recovery, metabolic alterations, anxiety and stress to the patients and patient dissatisfaction. Hence several studies have been conducted to identify the best methods of providing post-operative pain relief. The concept of preemptive analgesia introduced by Crile and further developed by Wall and Woolf revolutionized post-operative pain relief.[3] Kehlet and Dahl,[4] developed the concept of multimodal analgesia to reduce the dosage of opioids in patients who are at a high risk of developing chronic pain. The main aim of multimodal analgesia is to reduce the dosage and side effects of opioids by replacing with drugs which act by different mechanisms. Gabapentinoids have been found to be very effective in this role. This was the basis of this study.

This study was a randomized, cross sectional study in which ,60 patients undergoing abdominal hysterectomy surgeries under spinal anaesthesia were enrolled and allocated into 2 Groups-Group P received Pregabalin 300mg, Group G patients received Gabapentin 900mg two hours before surgery. They were informed preoperatively about the visual analogue score and were assessed postoperatively. This study is similar to the study conducted by Ghai A,Gupta.[5] In this study, oral Gabapentin was given in the dosage of 900 mg and Pregabalin was given in the dosage of 300 mg. This was similar to the study conducted by Rajendran et al.[6] Schmidt et al,[7] in 2013 evaluated many studies and postulated that higher doses of gabapentin (upto 1200 mg) and Pregabalin (upto 300 mg) were more clinically significant in reducing post-operative pain than lower doses. This was the reason why 300mg of

Pregabalin and 900 mg of Gabapentin were compared in this study.

Khan and colleagues,[8] observed that in the first 12 hours, morphine consumption and pain scores were lower, the time to the first rescue analgesia was longer, in groups receiving either 900 mg or 1200 mg gabapentin, compared with placebo or 600 mg gabapentin. Also plasma concentrations of gabapentin do not increase proportionally with increasing dose (non-linear absorption) and that the bioavailability of gabapentin drops to almost half as the dosage 17. increases from 900 mg to 3600 mg. On the other hand, the bioavailability of pregabalin is high and exceeds 90% irrespective of the dosage. Being 6 times more potent than gabapentin in binding affinity, its absorption is more rapid and without a ceiling of amount absorbed The efficacy of 300 mg pregabalin has been well proven in previous trials and it has proven efficacious at doses 2-4 fold lower than that of gabapentin. All the above factors were the basis of this study where in a single equipotent dose of gabapentin 900 mg was chosen in comparison to single 300 mg pregabalin. Hill et al,[11] found 300 mg pregabalin to be more effective than 50 mg pregabalin or 400 mg ibuprofen in attenuating pain after dental extraction. Paech et al,[9] did not observe improvement in analgesia with a single preoperative dose of 100 mg pregabalin before minor gynecological surgery involving uterus and cervix. Also, Jokela et al,[10] reported that premedication with pregabalin 150 mg in day-case gynecological laparoscopic surgery did not reduce fentanyl consumption. Since the doses of 100 and 150 mg were ineffective in day care surgeries, a higher dose was considered in our study for abdominal hysterectomy taking into consideration the more intense surgical stimulus Khan et al,[8] studied 175 patients undergoing lumbar laminectomy and found that patients who received either 900 or 1,200mg of gabapentin (either pre- or postoperatively) had lower pain scores throughout the entire first 24h than patients who received either placebo or 600mg of gabapentin.CK Pandey et al,[11] conducted a study in 100 patients undergoing lumbar discectomy in which the authors found that patients who received either 600, 900, or 1,200mg of gabapentin had better pain scores at all-time points than those receiving either placebo or gabapentin 300mg.

The drugs were given preoperatively. This is based on the study conducted by Tiippana et al,[16] who conducted a meta-analysis of 22 trials using gabapentinoids which concluded that a single dose of gabapentin (300 -1200 mg) given 1 to 2 hours preoperatively significantly reduced the post-operative pain scores and post- operative opioid consumption and opioid related side effects. The patients in each group received the drugs 2 hours prior to surgery. Their administration 2 hours prior to surgery appeared rational in order to attain maximal plasma concentration at the time of surgical stimuli though pregabalin is rapidly absorbed (peak: within 30 minutes to 2 hours) and gabapentin is slowly absorbed (peak: 2 hours). This is based on the study conducted by Elinor Ben Menachem,[13] who reported that the time of maximal plasma concentration of pregabalin was approximately 1 hour. The time of peak plasma concentration of gabapentin is around 2 to 3 hours (Rose et al,[14]). Two hours lapsed easily by the time patient received the drug and skin incision was given, which gave sufficient time to achieve peak effect of both the drugs.

In all the patients, standard anaesthetic technique was followed. The two groups were comparable in all demographic characteristics (age, height and weight). They were also comparable in relation to ASA physical status. Mean Duration in Gabapentin Group was 126 ± 14.03 and in Pregabalin Group was 124.5 ± 14.96. There was no significant difference in mean Duration comparison between two groups. In comparison, the duration of surgery in a study conducted by Rupal Shah et al,[15] the mean duration in gabapentin group were 112.36±8.38 and 113±8.49 in pregabalin group in abdominal hysterectomies under spinal anaesthesia having no statistical significance. The duration of surgery in a study conducted by Prasad et al the mean duration in gabapentin group were 100.80±7.20 and 100.00±6.61 in pregabalin group in vaginal hysterectomies under spinal anaesthesia.

In this study, the patients were educated about the Visual Analogue scoring. VAS scores were measured at 0 hrs,2hrs,4hrs,8 hrs,12 and 24 hrs after surgery. In the immediate postoperative period (0 hrs), VAS score showed no statistically significant difference between the three groups. This may be due to the effect of spinal anaesthesia. The mean VAS scores during postoperative period of 2, 4, 8, 12 and 24 hours in group Pregabalin patients were 2.53,4.00,3.13,2.50,1.87 respectively. In Group Gabapentin patients the mean VAS scores were 3.53,4.60,3.67,3.23,2.87 respectively. There was significant difference in Mean VAS scores comparison between two groups from 2 hrs to 24 hrs. VAS Scores were significantly low in Pregabalin group compared to Gabapentin group. This is similar to the results of study by Pal S et al,[16] where in the 24 h of postoperative period, the mean VAS scores at rest of Group Pregabalin was always significantly lower than those of Group Gabapentin. The decrease in pain scores is consistent with the studies by Tippana et al,[12] Rorarius MG et al,[17] and Al-Mujadi H et al.[18] A meta-analysis of 22 studies conducted by Tiipana et al,[12] revealed that in patients 73 receiving pre-operative gabapentin and pregabalin there was a significant reduction in pain scores during the first 24 hours post-surgery.

A study conducted by Agarwal et al,[19] evaluated the effectiveness of a single dose of Pregabalin 150 mg pre operatively in patients undergoing laparoscopic cholecystectomy. Patients receiving pregabalin showed significant reduction in VAS scores in the first 24 hrs post surgery which is similar to the results obtained in this study. In a study conducted by

A.Turan et al,[20] in patients undergoing abdominal hysterectomy, gabapentin produced significantly lower VAS scores both during rest and movement at 1,4, 8, 12, 16, 20 and 24 hours.

Postoperatively all patients were assessed for the level of sedation using Ramsay sedation score periodically at 0, 1, 2, 4, 6, 12, and 24 hours. There was no significant difference in Ramsay sedation score between two groups at all the intervals of follow-up. According to the study by Rose et al,[14] the elimination half of gabapentin in 4.8 to 8.7 hours which correlates with the findings of this study. The mean elimination t1/2 of pregabalin is 6.3 hours and is also independent of dose and repeated drug administration. This was also supported by the findings in this study. In a study by Rupal B Shah,[15] Ramsay Sedation scores were comparable at all- time intervals in both the groups except for in the first postoperative hour. In this study, the sedation scores were similar in pregabalin and gabapentin groups.

Postoperatively all patients were monitored for VAS scores periodically. When the VAS score was 4 or greater, patients were given Tramadol 2mg/kg intravenously as initial dose. In this study, it was found that the Mean Time of analgesic in Gabapentin Group was 168.90 ± 15.40 and in Pregabalin Group was 178.80 ± 12.53 with a p value of 0.008 which was significant. This indicated that there was significant difference in mean Time of analgesic between two groups. This shows that Pregabalin provided more prolonged pain relief compared to Gabapentin due to pregabalin having a quicker and consistent action as compared to gabapentin. This finding correlates with the findings in many other studies. In a study by Saraswat et al,[21] the time from spinal analgesia to first dose of analgesic was 8.98h in Group Gabapentin whereas 14.17h in Group Pregabalin, which was highly significant ($P < 0.001$). In the study conducted by Rajendran et al,[6] the time for rescue analgesic in control, pregabalin and gabapentin groups were 4.93 hrs,24 and 20.76 hrs respectively. The increased time interval in their study could be because the rescue analgesic was given only when VAS scores were higher than 7 whereas in this study the rescue analgesic was given when VAS score was 4 and above. Moreover, the duration of surgery in their study was shorter (45.6,46.7,48.17 minutes) compared to this study. In the study conducted by Usha Bafna et al,[22] in 90 patients undergoing gynaecological surgeries under spinal anaesthesia, the mean duration of effective analgesia in pregabalin group was 535.16 ± 32.86 min versus 151.83 ± 16.21 min in control group and 302.00 ± 24.26 min in gabapentin group. However, the duration of surgery in their study were 56 minutes,59 minutes and 57 minutes respectively. Tiipana et al 's,[12] meta-analysis of 22 studies also gives evidence to the fact that pregabalin and gabapentin provide prolonged significant postoperative pain relief compared to placebo. In a study by Pal S et al,[16] the time required for the administration of the rescue analgesic postoperatively was found to be significantly earlier in case of Group G compared to Group P. That means that pregabalin showed prolonged postoperative analgesia compared to gabapentin. This concurs with the findings of this study.

In this study, the mean dosage of rescue analgesic (tramadol) administered in 24 hours was calculated. Mean Tramadol dose in Gabapentin Group was 263.33 ± 31.984 and in Pregabalin Group was 245.00 ± 37.943 with a p value of 0.048 which was significant. There was significant difference in mean Tramadol dose comparison between two groups. Gabapentin group required higher Tramadol compared to Pregabalin group. The findings in this study are consistent with the results of Ghai et al,[5] study which revealed that pregabalin 300 mg, given orally 1–2 hours before abdominal hysterectomy, resulted in significantly reduced postoperative analgesic requirement compared with gabapentin 900 mg and placebo. Post-operative diclofenac and tramadol consumption was 250 +105mg in placebo compared to 152+46mg in pregabalin group and 170+54 mg in gabapentin group. The 24 hours analgesia requirement was significantly low in group Pregabalin compared to gabapentin, comparable to the studies conducted by Khetarpal et al,[23] Khurana et al.[24]

In this study, In Gabapentin Group, 13.33% had nausea, 13.33% had vomiting and 23.33% had Dizziness. In Pregabalin Group, 16.67% had nausea, 16.67% had vomiting and 20.00% had Dizziness. There was no significant difference in side effects distribution between two groups. This finding is similar to a study conducted by Dirks et al and C K Pandey et al,[25] in patients undergoing discectomy , it was found that incidence of side effects like nausea (5 vs 4) , vomiting (3vs 4) , fatigue (1 vs 0) and dizziness (1vs 0) were found to be similar in Gabapentin group and pregabalin group. Rajendran et al 's,[6] study also showed no significant side effects in patients receiving pregabalin or gabapentin.

CONCLUSION

Both Pregabalin (300 mg) and Gabapentin (900 mg) are effective in reducing post- operative pain scores and providing good post-operative analgesia in patients undergoing abdominal hysterectomy surgeries under spinal anaesthesia. However, Pregabalin(300mg) provides prolonged pain relief compared to Gabapentin(900mg) in the post-operative period. Pregabalin is found to have superior efficacy with respect to quality and duration of analgesia when compared with gabapentin. Both drugs reduce post-operative opioid requirement in the first 24 hours post- surgery. Both drugs have minimal adverse effects.

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