



ORIGINAL RESEARCH PAPER

Anaesthesiology

SAFETY AND EFFICACY ANTIEMETIC EFFECT OF INTRAVENOUS PALONOSETRON AND ONDANSETRON FOR THE PREVENTION OF INTRA -OPERATIVE NAUSEA AND VOMITING FOLLOWING SPINAL ANAESTHESIA DURING CESEAREAN SECTION.

KEY WORDS: Intra-operative, palonosetron, ondansetron, vomiting.

Dr Md Jawed Akhtar	Post Graduate Student, Department Of Anaesthesiology At Anugrah Narayan Magdh Medical College, Gaya.
Dr . Pramod Kumar Sinha*	Associate Professor and H.O.D, Department of Anaesthesiology at Anugrah Narayan Magdh Medical College, Gaya. *Corresponding Author
Dr Dilip Kumar	Post graduate student, Department of Anaesthesiology at Anugrah Narayan Magdh Medical College, Gaya.
Dr Gaurav Kumar	Post graduate student, Department of Anaesthesiology at Anugrah Narayan Magdh Medical College, Gaya.

ABSTRACT

BACKGROUND AND OBJECTIVE Intra-operative nausea and vomiting is one of the most common complications in patients undergoing spinal anaesthesia for cesarean section . This study is done to know the efficacy and safety of administration of palonosetron and ondansetron in the prevention of intra operative nausea and vomiting in patients undergoing spinal anaesthesia for cesarean section.

MATERIAL AND METHODS After obtaining the approval of institutional ethical committee a prospective observational study was conducted for one years on 60 patients belonging to American Society of anaesthesiologists grade I and II (ASA I and II) patients aged between 19 to 30 years scheduled for cesarean section under spinal anaesthesia, the patients who fulfil the inclusion and exclusion criteria and willing to participate in the study were included in the study.60 patients fulfilling the inclusion and exclusion criteria were divided into two groups Group A (patients receiving inj. palonosetron 75 micrograms I.V.) and Group B (patients receiving inj. ondansetron 4 milligrams I.V.) before the induction of anaesthesia. Standard anaesthetic management was done in all cases. Incidence of intra operative nausea and vomiting was recorded in all patients for the efficacy of palonosetron to ondansetron in the prevention of intra operative nausea and vomiting was evaluated. Data was evaluated statistically using MS Exel 2007 and MS Word 2007, mean,SD, and percentages generated.

RESULT AND CONCLUSION Both group A and group B had comparable demographic profile [(age, weight ASA grade, duration of surgery) .At the conclusion of the study it was found that the prophylactic usage of inj. Palonosetron 75 mcg I.V. is more effective than inj. ondansetron in the prevention of intra operative nausea and vomiting in patients undergoing spinal anaesthesia for cesarean section.

INTRODUCTION

Intra-operative nausea and vomiting is one of the most common complications in patients undergoing spinal anaesthesia for cesarean section[1][2][3] .This study is done to know the efficacy and safety of administration of palonosetron (75 micrograms I.V) and ondansetron (4 milligrams I.V) in the prevention of intra operative nausea and vomiting in patients undergoing spinal anaesthesia for cesarean section.

OBJECTIVES

To compare the efficacy of Palonosetron and ondansetron in prevention of intra operative nausea and vomiting following spinal anaesthesia for cesarean section

- 1) To compare the duration of antiemetic effect of ondansetron and palonosetron
- 2) To assess the adverse effects, if any of ondansetron and palonosetron
- 3) To compare the anti-emetic efficacy of ondansetron and palonosetron

MATERIAL AND METHODOLOGY

The present prospective of study includes evaluation of a total 60 patients admitted in Anugrah Narayan Magadh Medical College (ANMMCH) under emergency labour room and posted for cesarean section.

After obtaining the approval from the institutional ethical committee the study was performed among 60 patient aged between 19 to 30 years belonging to ASA grade I and II who were posted for cesarean section under spinal anaesthesia

Patients belonging to Group A, will receive Inj. Palonosetron 0.075 mg intravenously before the induction of anaesthesia

Patients belonging to Group B, will receive Inj. Ondansetron 4 mg (2 ml) intravenously before the induction of anaesthesia Incidence of nausea and vomiting is recorded every 15 mins upto the 1 hour or till the patients shifted from labour OT.

Inclusion Criteria:

- 1) Patient willing to sign the written & informed consent
- 2) Patients belonging to American Society of anesthesiologists grade I and II
- 3) Patients with no history of allergy to serotonin antagonist group will be selected for the study.

Exclusion Criteria:

- 1) Patient's refusal from taking part in the study.
- 2) Patients who have used antiemetic medication within 24 hrs before induction of surgery.
- 3) Patients having history of drug abuse in the past.
- 4) Patient who have history of allergic reactions to serotonin antagonists in the past
- 5) Patient who have history of post-operative nausea and vomiting in the past

Efficacy And Safety Evaluation

Efficacy of the two drugs ondansetron and palonosetron were compared in patients posted for cesarean section, data recorded every 15 min and presented in a table form:-

TIME	INCIDENCE OF VOMITTING	
	ONDANSETRON (N=30)(B)	PALONOSETRON (N =30)(A)
15 MIN	7 (23.3%)	3 (10%)
30 MIN	3 (10%)	1 (3.33%)
45 MIN	1 (3.33%)	0
60 MIN	1 (3.33%)	0

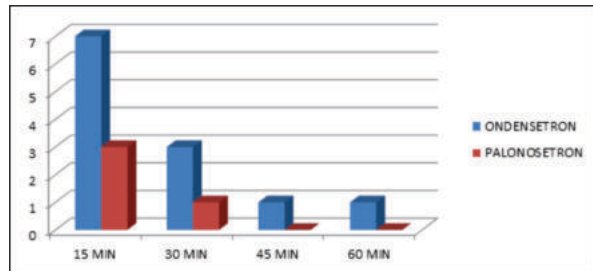
Study groups were divided into group A and group B, Patients

belonging to Group A, was given Inj. Palonosetron 0.075 mg intravenously before the induction of anaesthesia. Patients belonging to Group B, was given Inj. Ondansetron 8 mg (4 ml) intravenously before the induction of anaesthesia

Incidence of nausea and vomiting is recorded every 15 mins upto the 1 hour or till the patients shifted from labour OT.

In group B receiving ondansetron 4mg , out of 30 patients observed 7 (23.3%) vomited in first 15 min, 3 (10%) in 30 min, 1(3.33%) in next 45 and 60 min, no other adverse effect noted.

In group A receiving .075 mg of palonosetron ,out of 30 patients observed, 3 (10 %) vomited in the first 15 min , 1 (3.33%) in next 30 min ,nil reported in 45 and 60 min , no other adverse effect noted



Graph showing effect of drugs intra-operatively with time

RESULT AND CONCLUSION

To conclude inj. Palonosetron 0.075mg given intravenously is better than inj. Ondansetron 8mg given intravenously before induction of spinal anaesthesia in patients undergoing cesarean section surgery for the prevention of post operative nausea and vomiting as the number of patients with episodes of nausea, vomiting and the need of rescue anti emetic was lower in palonosetron group when compared to ondansetron group.

Conflict Of Interest:- None

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