**Original article:**

**Comparative study of ondansetron, granisetron and ramosetron for prevention of postoperative nausea and vomiting (PONV) in surgeries under general anaesthesia.**

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**Abstract:**

**Introduction:** Prevention of postoperative nausea and vomiting (PONV) poses an anaesthetic challenge for surgeries under general anaesthesia. This study was aim to evaluate and compare the efficacy of ondansetron, granisetron and ramosetron as prophylactic antiemetic for surgeries under general anaesthesia.

**Methodology :** 90 patients of ASA grade I and II in the age group 20-65 years scheduled for surgery under general anaesthesia were studied. Patients were divided into three groups of 30 patients each according to computer generated random allocation. The patients received the following drugs intravenously. Inj. ondansetron 0.1mg/Kg (ondansetron group) Inj. granisetron 40µg/Kg (granisetron group)Inj.ranmosetron 0.3 mg (ramosetron group). All the drugs were diluted to 5ml volume in normal saline. The drugs were given 5 minutes prior to induction of anaesthesia. Postoperatively all episodes of nausea, retching and vomiting were recorded during 1st 24 hours. Efficacy of the drug was evaluated as a complete response – no nausea, retching or vomiting and no need for rescue medication. The observations obtained were tabulated and analysed using one way analysis of variance (ANOVA) or using chi-square test.

**Results:** During 0-3 hrs of postoperative period statistically non-significant difference were present in all the study groups (P > 0.05). During 3-24 hrs postoperative period, statistically significant difference was present between ramosetron and ondansetron groups (P< 0.05). However there was no significant statistical difference between granisetron and ramosetron group during the same period. (P > 0.05).

**Conclusion:** Based on this study it is concluded that upto 3 hrs postoperative period all the thre study drugs i.e. ondansetron, granisetron and ramosetron are comparable to eachother for prevention of nausea, retching and vomiting. Both ramosetron and granisatron are better than ondansetronupto 24 hrs postoperative period.

**Keywords:** ondansetron, granisetron, ramosetron