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**Original article:**

**Chemotherapy induced nausea and vomiting in cancer patients**

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**Abstract:**

Cancer is increasing at alarming rate globality. Chemotherapy is the primary treatment for cancer and in some cases the only resort. Most of the chemotherapeutic drugs have been found to cause release of large amounts of serotonin from enterochromaffin cells in he gut, serotonin acts on 5-HT3 receptors in the gut and brain stem and stimulate vagal afferents to initiate the vomiting reflex. Chemotherapy induced nausea and vomiting (CINV) remains a significant problem for cancer patients, having a long lasting effect on their quality of life and lead to unpredicted complications like aspiration pneumonia e.t.c. Anti cancer agents having highest morbidity in terms of nausea and vomiting. There is evidence that emesis control during chemotherapy acts on the quality and cost of treatment by allowing a better compliance to schedule drug dose. It improves the quality of life of patients by reducing the intensity and number of side effects and thereby reducing the length of hospitalization and treatment related expenditure.2 Present study is primarily to compare the efficiency, safety and cost of 5-HT3 receptor antagonists in cancer patients. Findings suggest that overall response for nausea and vomiting with Palonosetron was superior to Ondansetron and Granisetron, especially in high emetogenic chemotherapy regimens. Failure rate with Palonosetron was less when compared with Ondansetron and Granisetron for high emetogenic chemotherapy regimens. All the three drugs have almost similar side-effect profiles in prophylaxis of CINV secondary to moderately or highly emetogenic chemotherapy. The cost of Palonosetron is almost seven times that of Ondansetron and four times that of Granisetron for each chemotherapy cycle. Herapeutic option of choosing antiemetic by the treating physician has to focus on efficacy, safety and cost of the antiemetic to minimize the economic burden on the patient depending on economic status of the patient.