Study of Different Anti-emetic Regimens to Improve The Control of Nausea and Vomiting in Patients Receiving Chemotherapy

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Abbreviations

CINV	Chemotherapy Induced Nausea and Vomiting
HEC	High Emetogenic Chemotherapy
MEC	Moderate Emetogenic Chemotherapy
NCI	National Cancer Institute
NCCN	National Comprehensive Cancer Network
ASCO	American Society of Clinical Oncology
MASCC	Multinational Association of Supportive Care in Cancer
5-HT3-RA	5-Hydroxytryptamine Type3- Receptor Antagonist
NK1	Neurokinin 1 receptors
CTZ	Chemoreceptor Trigger Zone
FLIE	The Functional Living Index-Emesis
QoL	Quality of Life
BID	Twice Daily
TID	Three Times Daily
QID	Four Times Daily
OD	Once Daily

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Abstract

Abstract

Background: Chemotherapy-induced nausea and vomiting (CINV) is still one of the most feared side effects of chemotherapy. With the correct use of antiemetic, CINV can be prevented in almost 70% to up to 80% of patients. Treatment guidelines are useful tools that enable physicians to integrate the latest clinical research into their practices. However, there is evidence that adherence to and implementations of treatment recommendations are less than optimal, Uncontrolled CINV can lead to reduced quality of life.

Objective : To study different anti-emetic regimens to improve the control of nausea & vomiting in patients receiving chemotherapy ,and compare the impact of acute nausea and vomiting (during the first 24 hours post chemotherapy) and delayed nausea and vomiting (day 2 through 5days post chemotherapy) on patients' quality of life (QoL) after highly or moderately emetogenic chemotherapy.

Patients and Methods: The current study was prospective, intervention, randomized study; it was carried out at the Outpatient Clinic of Medical-Oncology Department Medical Oncology Department of National Cancer Institute (NCI) Cairo, during the period of Aug 2009 to Feb 2010.

A total of 66 Patients were categorized into three groups: group I (control group): This group included 27 patients 6 males and 21 females, they received their chemotherapy and the conventional antiemetic regimen, as following: Pre chemotherapy Ondansetron 8mg IV, ranitidine 50mg IV and dexamethasone 8mg IV (first day) and ranitidine 150 mg PO and domperidone 10mg PO were bid for seven days post chemotherapy. group II (interventional group): This group included 31 patients; 7 males and 24 females, they received their chemotherapy and antiemetic regimen, as following: before chemotherapy ondansetron 8mg

IV, ranitidine 50 mg IV and dexamethasone 8mg IV. After 12h of chemotherapy they received metoclopramide 20mg IV and dexamethasone 8m IV (first day), and in the second day metoclopramide 20mg PO and dexamethasone 8mg IV were bid for three days. group III (interventional group), this group included 8 female patients, they received their chemotherapy and antiemetic regimen, as following: before chemotherapy ondansetron 8mg IV, ranitidine 50 mg IV and dexamethasone 8mg IV. After 12h of chemotherapy they received ondansetron 8 mg IV, and dexamethasone 8mg IV (first day), in the second day ondansetron 8mg IV and dexamethasone 8mg IV were bid for three days. Patients recorded episodes of nausea and vomiting in a diary. Patients completed the Functional Living Index-Emesis (FLIE) questionnaire on day 5.

Results: for the comparison between different antiemetic regimen to improve control of nausea and vomiting there is highly statistically significant differences between group I, group II and group III, in acute phase: Nausea among group I (n=27), 48.1% are severe; 18.5% are moderate; 14.8% are mild and 18.5% are none; while among group II (n=31), 3.2% are mild and 96.7% are none, and 100% none in group III. And in delayed phase: Nausea among group I (n=27), 35.1% are severe; 26.8% are moderate; 8.3% are mild and 29.6% are none; while among group II and group III 100% none. Also there is high significant differences between group I, group II and group III, in acute phase: Vomiting among group I (n=27), 40.7% are severe; 11.1% are moderate; 29.6% are mild and 18.5% are none; while among group II (n=31), 3.2% are mild and 96.7% are none and 100% none in group III (n=8). And in delayed phase: Vomiting among group I (n=27), 25 % are severe; 22.3% are moderate; 16.7% are mild and 37.9% are none; while among group II (n=31), 3.2% are mild and 96.7% are none and 100% none in group III

(n=8).We found that 59.9% of patients of group I CINV impact on their lives, as well as 63.9% from the same group been affected by nausea and 48.1% of them been affected by vomiting, the high significant differences between group I, group II and group III in reporting no impact of CINV.

Also there is highly significant differences between studies groups in different phases of response rate (complete response and no nausea), which group II and group III show a complete response and no nausea.

Conclusion: Regimen of antiemetic containing metoclopramide and dexamethasone is more control on CINV and reduced the impact of CINV on quality of life of patients.

Introduction and Aim of the work