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Proceeding International Conference on Pharmacy and Advanced Pharmaceutical Sciences
Yogyakarta, Indonesia, 2009
Antiemetics utilization in cancer patients with high emetogenic cytotoxic drugs in two govermental hospital in Indonesia

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Abstract

Nausea and vomiting are common side effects of cancer chemotherapy and can impair patient quality of life. The distress resulting from this side effect can escalate over time and may decrease the patient compliance in continuing potentially beneficial treatment. This reasearch was aimed to know anti-emetics utilization in cancer patients with high emetogenic cytotoxic drug in two governmental hospital in Indonesia. The research was descriptive design with prospectively data collecting from the two governmental hospital in Indonesia, with the same type of hospital. We took cancer patients who got the high emetogenic of cytotoxic drug during 1 month. Data was taking from patients' medical record and patients diary card to know the episodes of vomiting in acute emesis (24 hours after cytotoxic drug administration) and delayed emesis (5 days after cytotoxic drug administration). Vomiting has to be absent at least 1 minute to count the episodes of vomiting. Result of this research showed that, in the Hospital A there were 6 patients with high emetogenic cytotoxic drugs (cisplatin, ≥50 mg/m² and/or its combination) with the total number of chemotherapy cycles were 20. There were 14 cycles of chemotherapy which patients had vomiting episodes and 6 cycles with no vomiting episodes. The antiemetics which were given to the patients were combination of ondansetron, dexamethason and diphenhydramine or ranitidine. Almost all of the patients were experiencing acute emesis, only 1 patient who experiencing delayed emesis. According to the hospital B, there were 31 cycles of chemotherapy with high emetogenic cytotoxic drug over the 9 cancer patients, There were 24 cycles of chemotherapy which patienty had vomiting episodes and 7 cycles with no vomiting episodes. Acute emesis was experienced by 24 patients and 7 patients had no emesis. Patients with acute emesis got the combination of metoclopramide and dexamethasone and patients with no emesis got comination of ondansetron and dexamethasone. Conclusion, the use of antiemetics in the cancer patients who got high emetogenic cytostatic in the two governmental hospital in Indonesia was not appropriate with the standard therapy, since the patients were still experiencing vomiting episodes.

Key words: antiemetics, cytotoxic, high emetogenic

Introduction

Cancer was still becoming problem of the health in the world. In developed countries, cancer caused of the second death after cardiovascular disease. The incidence and mortality of cancer in each country were influenced by geographical condition, race and population (Tierney et al., 2006). During 2006, more than half incidences of cancer were prostate cancer, breast cancer, colon cancer and lung cancer. The incidence of cancer in the United States during 2006 reached 1,398,700 that covered 234,460 incidence of prostate cancer, 212,920 incidence of breast cancer to the woman, 174,470 lung cancer incidents and 148,610 incidence of colon cancer (Anonymous, 2005). The highest incidence of cancer in the woman in Indonesia during 2002 was breast cancer followed by cervix cancer, whereas the highest incidence of cancer in the man in Indonesia was lung cancer followed by colon cancer. The early cancer data was in Indonesia taken was based on hospital data during 2002 (Anonymous, 2002). During 1995, the incidence of cancer in Yogyakarta to the man was 35,49 per 100,000 of lung cancer (5,96 per 100,000), colon cancer (5,55 per 100,000), skin cancer (3,49 per 100,000), rectal cancer (3,35 per 100,000), and bladder cancer (2,97 per 100,000). To the incidence woman of cancer a little higher than the man, that is 47,91 per 100,000; breast cancer (12,54 per 100,000), cervix cancer (8,70 per 100,000), ovariun cancer (6,11 per 100,000), skin cancer (4,17 per 100,000) and colon cancer (2,84 per 100,000) (Soetiarto, 2001).
Results and Discussions
Demographic data of the cancer patients from the two hospitals were listed in table 1. Result of this research showed that, in the Hospital A there were 6 patients with high emetogenic cytotoxic drugs (cisplatin, ≥50 mg/m2 and/or its combination) with the total number of chemotherapy cycles were 20. In average, each patients had more than 4 cycles. According to the hospital B, there were 31 cycles of chemotherapy with high emetogenic cytotoxic drug over the 9 cancer patients. In average, each patients had 4 cycles.

There were 14 cycles of chemotherapy which patients had vomiting episodes and 6 cycles with no vomiting episodes in the hospital A. The antiemetics which were given to the patients were combination of ondansetron, dexamethasone and diphenhydramine or ranitidine. Almost all of the patients were experiencing acute emesis, only 1 patient who experiencing delayed emesis. However, in the hospital B, there were 24 cycles of chemotherapy which patients had vomiting episodes and 7 cycles with no vomiting episodes. Acute emesis was experienced by 24 patients, delayed emesis was not experiencing and 7 patients had no emesis.

Table 1. Demographic data of the cancer patients

<table>
<thead>
<tr>
<th></th>
<th>Hospital A (n=6) (%)</th>
<th>Hospital B (n=9) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>100%</td>
<td>10%</td>
</tr>
<tr>
<td>Female</td>
<td>0%</td>
<td>90%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 40 years old</td>
<td>16,16%</td>
<td>-</td>
</tr>
<tr>
<td>40-50 years old</td>
<td>66,60%</td>
<td>77,78%</td>
</tr>
<tr>
<td>&gt;50 Years old</td>
<td>16,16%</td>
<td>22,22%</td>
</tr>
<tr>
<td>Cancer diagnoses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NHL = 66,60%</td>
<td></td>
<td>Cervix : 55,5%</td>
</tr>
<tr>
<td>Etc = 33,4%</td>
<td></td>
<td>Etc : 44,5%</td>
</tr>
<tr>
<td>Cycle of chemotherapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 cycle</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>2 cycle</td>
<td>16,60%</td>
<td>22,22%</td>
</tr>
<tr>
<td>3 cycle</td>
<td>33,34%</td>
<td>22,22%</td>
</tr>
<tr>
<td>&gt;4 cycle</td>
<td>50,00%</td>
<td>55,55%</td>
</tr>
<tr>
<td>High emetogenic chemotherapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cisplatin doses&gt;50 mg/m2</td>
<td>16,60%</td>
<td>22,22%</td>
</tr>
<tr>
<td>Cisplatin doses &gt;50 mg/m2</td>
<td>53,34%</td>
<td>77,77%</td>
</tr>
</tbody>
</table>

Patients with acute emesis got the combination of metoclopramide and dexamethasone and patients with no emesis got combination of ondansetron and dexamethasone.

Result of the research suggested that the use of anti-emetic combinations were inappropriate, therefore the patients still had acute vomiting episodes or delayed vomiting episodes. Result of this study need to be confirmed with larger sample size to propose the rationality of anti-emetic used in oncology.

Conclusion
The use of antiemetics in the cancer patients who got high emetogenic cytostatic in the two governmental hospital in Indonesia was not appropriate with the standard therapy, since the patients were still experiencing vomiting episodes.

Acknowledgement
The author thank to the Fikri Ilhamni and danik sulistyoningsih who helped in taking the data in hospitals.