Chemotherapy-Induced Secondary Amenorrhea in Breast Cancer Patients in Gheam and Omid Hospital

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Objective:

- The objective of this study was to investigate the impact of chemotherapy-induced secondary amenorrhea in breast cancer patients and its relation to courses and type of chemotherapy agents.
Materials and Methods:

- We conducted a descriptive cross-sectional analytic study during eight years (1997-2005) in oncologic department of Ghaem and Omid hospitals of Mashhed University.
Trial group were 120 pre menopausal patients had received then these patient divided to three groups.

- Chemotherapy agents cyclophosphamide,
- For first group metothrexate and fluorourcil (CMF) recommended versus
- In second group who them were user cyclophosphamide Adriamycin and fluorourcil (CAF)
- Third group who received Adriamycin and cyclophosphamide (AC)
Menstrual cycle status during treatment and in follow-up periods in these selected patients had recorded. None of these patients used tamoxifen.
We evaluated different criteria included: menstrual cycle status before and after chemotherapy.

- Incidence of secondary amenorrhea and correlation between amenorrhea with types.
- Courses of chemotherapy agents.
Statistically analysis using the SPSS software was performed and T-Test and $\chi^2$ used for comparative evaluation and $P<0.05$ considered significant.
Results:

- Data on 120 patients was defined that the age of 58.3% of them were < 40 years old.
- Majority of pathological type of breast cancer patients were, ductal carcinoma. The most common type of chemotherapy regimen were CMF, CAF and AC.
• The average number of chemotherapy courses in CMF group was 6.2±2.6, in CAF group was 7.2±0.6 and in AC group was 6.4±0.5 (P=0.3).

• Chemotherapy induced secondary amenorrhea established in 74.1% of patients, this finding was more common in patients > 40 years old.
- Duration amenorrhea was between 2.3-4 years, but this data was not statistically significant (P=0.5). According to statistical.
- The incidence of amenorrhea in CMF group was 72.5% and in CAF group was 71.4% and in AC group was (P=0.6). Although this finding was positive between amenorrhea and courses of chemotherapy (P=0.03).
Conclusions:

- In premenopausal patients with breast cancer, demonstrated chemotherapy had cytotoxicity against tumor cell and yielded amenorrhea due to ovarian failure.
Table 1: distribution age in patients

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<tr>
<th>AC</th>
<th>CAF</th>
<th>CMF</th>
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<td></td>
<td>N</td>
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<td>4.72</td>
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<td>50</td>
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<td>1.24</td>
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Table 2: incidence of Amenorrhea in patients

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<th>Drug</th>
<th>AC</th>
<th>CAF</th>
<th>CMF</th>
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Thank you