Palonosetron-based antiemetic prophylaxis in breast cancer patients receiving AC chemotherapy – registry data from German gynaeco-oncology practices

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Updated Abstract

Introduction: Anthrycine/cyclophosphamide (AC)-based chemotherapy (CT) in women with breast cancer (BC) is considered a situation with high risk for nausea and vomiting. International antiemetic guidelines recommend a tripelet antiemetic prophylaxis with 5-HT3-receptor-antagonist (SHT3RA), neurokinin1-receptor-antagonist (NK1RA) and dexamethasone (DEX). Palonosetron (P), a SHT3RA with longer half-life and stronger receptor binding affinity than older compounds, has demonstrated its efficacy as SHT3RA in moderately (MEC) and highly (NEC) emetogenic CT and has proven high efficacy in the triplet prophylaxis in recent clinical trials. Gynaecologists who are associated in the BNGO document all patients by using an online registry in order to control, maintain and improve treatment quality and measure outcome. The objective of this analysis was to evaluate the efficacy of PAL-based antiemetic prophylaxis with or without the NK1A antepitant (APR) in BC patients (pts) receiving AC-based chemotherapy in BNGO practices.

Methods: From 11/2008 until 3/2015, 2,986 BC patients receiving AC-containing chemotherapy and antiemetic prophylaxis based on PAL have been documented using the ODM Quasi® GYN online documentation system. Severity, frequency, duration and onset of nausea (N) and vomiting (V) were assessed after the 4th antiemetic treatment cycle. Efficacy criteria were complete control (CC: no V, no rescue medication (RM), only mild N); complete response (CR: no V, no RM) and RM.

Results: 2,986 pts with a median age of 55 years received a PAL-based antiemetic prophylaxis and were documented in 49 practices. In 79.2 % of pts the A component of the CT schedule was epidoxorubicin. Response was evaluated after cycle 4. Efficacy of all PAL-based antiemetic regimens (n=2,986): CC: 63.0 %, CR 77.9 %. Rescue Medication was applied in 8.9 % of pts. Efficacy of the triplet therapy of PAL plus APR plus DEX (n=716): CC 73.2 %, CR 84.5 %, RM 7.7 %. 79.2 % of pts had no or only mild nausea in the overall risk phase, 51.1 % of all pts had severe nausea during the overall phase. No additional side effects were observed with the triplet therapy. Conclusions: Antiemetic prophylaxis based on the SHT3-RA P AL is effective in breast cancer pts receiving AC chemotherapy. The addition of APR to PAL enhances the efficacy in the reduction of vomiting and nausea in the acute and the delayed phase. The triple therapy is well tolerated.

Background

Since 2008, the efficacy of palonosetron-based antiemetic prophylactic regimens has been recorded via the online documentation system of the BNGO. Current guidelines recommend a three drug combination consisting of SHT3RA, neurokinin1-receptor-antagonist (NK1RA) and dexamethasone (DEX). This retrospective analysis of data from 49 BNGO-practices evaluated the efficacy of a palonosetron-based antiemetic prophylaxis regimens with or without NK1-RA after 4 cycles of an anthracycline/cyclophosphamide (AC)-containing chemotherapy in breast cancer patients. In clinical studies palonosetron proved to be highly effective within a three drug combination in patients receiving HEC and AC.

Material and Methods

This retrospective analysis evaluated the data of 2,986 breast cancer patients after 4 cycles of AC-containing chemotherapy who had received palonosetron as a two drug combination with dexamethasone or as a three drug combination with additional NK1-RA. For documentation, 49 practices used the specialized ODM Quasi®GYN online documentation system. Severity, frequency, duration, and onset of nausea (N) and vomiting (V) were recorded in a patient diary. Efficacy criteria were: Complete control (CC: no V, no rescue medication, mild N); complete response (CR: no V, no rescue medication) and rescue medication. Response was evaluated after cycle 4.

AC Chemotherapy Regimens

Efficacy of Palonosetron Regimens

Results

2,986 patients treated with AC-containing chemotherapy received a palonosetron-based antiemetic prophylaxis. In 79.6 % of patients the anthracycline was epidoxorubicin. Median patient age was 55 years.

All Palonosetron-based antiemetic regimens: 63.4 % of patients reached complete control and 77.9 % reported complete response after cycle 4. 8.9 % of patients needed rescue medication.

Triplet antiemetic prophylaxis: In total, 716 patients (24.0 %) of all breast cancer patients receiving AC chemotherapy have been treated with the triple antiemetic prophylaxis consisting of palonosetron/dexamethasone/NK1RA (P-N-Dex). The use of P-N-Dex has increased since 2013:

<table>
<thead>
<tr>
<th>Year</th>
<th>P-N-Dex</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008-2010</td>
<td>24.3 %</td>
</tr>
<tr>
<td>2011</td>
<td>21.0 %</td>
</tr>
<tr>
<td>2012</td>
<td>20.9 %</td>
</tr>
<tr>
<td>2013</td>
<td>24.4 %</td>
</tr>
<tr>
<td>2014</td>
<td>27.1 %</td>
</tr>
<tr>
<td>Jan-March 2015</td>
<td>29.0 %</td>
</tr>
</tbody>
</table>

Efficacy of P-N-Dex after 4 cycles of AC-containing chemotherapy: complete control 73.2 %, complete response 84.5 %, rescue medication 7.7 %

Nausea control: 51.5 % had no nausea during the overall risk phase (day 1–5) and 76.2 % had no or only mild nausea. Only 5.2 % of patients reported severe nausea in the overall risk phase. In the delayed phase (day 2–5), 78.2 % of patients reported no or only mild nausea.

Delayed nausea, all Palonosetron-based regimens

3.6 %

Conclusions

Palonosetron-based antiemetic prophylaxis proved to be effective in these comparisons due to its emetogenic palonosetron AC chemotherapy. The addition of the NK1-RA antepitant increases the efficacy in the reduction of vomiting and nausea even further. Delayed nausea was well controlled. Efficacy was maintained over all 4 cycles of chemotherapy applied.

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