DOXORUBICIN-CYCLOPHOSPHAMIDE followed by DOCETAXEL

Neoadjuvant Treatment of Non-Metastatic Breast Cancer

**Order Group 1**

<table>
<thead>
<tr>
<th>CYCLOPHOSPHAMIDE</th>
<th>600mg/m²</th>
<th>IV</th>
<th>Day 1</th>
<th>Round to nearest 10mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Mix in 250mL bag Normal Saline. Infuse over 10-20 minutes.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>DOXORUBICIN</th>
<th>60mg/m²</th>
<th>IV</th>
<th>Day 1</th>
<th>Round to nearest 1mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Slow push through sidearm of free flowing IV. Give 2 to 4mg (1-2mL) per minute.</td>
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</tbody>
</table>

**REPEAT EVERY 21 DAYS for a total of 4 cycles**

**Order Group 2**

To start 21 days after last administration of Doxorubicin-Cyclophosphamide (AC)

<table>
<thead>
<tr>
<th>DOCETAXEL</th>
<th>100mg/m²</th>
<th>IV</th>
<th>Day 1</th>
<th>Round to nearest 3mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Mix in 250mL bag 5% Dextrose or Normal Saline to a maximum concentration of 0.3-0.9mg/mL.</td>
<td></td>
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<tr>
<td>- Use non-PVC equipment without a filter; Infuse through main IV line.</td>
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<tr>
<td>First and Second Dose:</td>
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<tr>
<td>- Infuse at a slower rate and then increase incrementally.</td>
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<tr>
<td>- Infuse at 30mL/hr for 5 minutes, then at 60mL/hr for 5 minutes, then at 125mL/hr for 5 minutes, then finally at 250mL/hr until infusion complete.</td>
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<tr>
<td>Subsequent doses:</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- Infuse over 1 hour.</td>
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</tr>
</tbody>
</table>

**REPEAT EVERY 21 DAYS for a total of 4 cycles**

<table>
<thead>
<tr>
<th>DEXAMETHASONE</th>
<th>8mg</th>
<th>PO</th>
<th>Day 0</th>
<th>4mg tablet</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Q12H for 3 days starting one day before chemotherapy.</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIPHENHYDRAMINE</th>
<th>50mg</th>
<th>IV</th>
<th>Day 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Admix in 50-100mL minibag 5% Dextrose or Normal Saline.</td>
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<tr>
<td>- Give over 10-15 minutes.</td>
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<tr>
<td>- Wait 30 minutes before Docetaxel dose started.</td>
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</tbody>
</table>

**TESTS:**

<table>
<thead>
<tr>
<th>Baseline Tests</th>
<th>WBC</th>
<th>HB</th>
<th>PLT</th>
<th>ANC</th>
<th>Cr</th>
<th>Urea</th>
<th>T.Bili</th>
<th>AST</th>
<th>ALT</th>
<th>AlkPhosphatase</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC Day 1</td>
<td>WBC</td>
<td>HB</td>
<td>PLT</td>
<td>ANC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Docetaxel Day 1</td>
<td>WBC</td>
<td>HB</td>
<td>PLT</td>
<td>ANC</td>
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</tbody>
</table>

**Test Notes:** - Repeat lytes, urea, Cr, LFTs every 3 cycles or prn.

- Baseline: LVEF if clinically indicated.

**ANTIEMETIC PRE-CHEMO REGIMEN:**

**Level C**

Day 1 AC
- Ondansetron 8mg PO/IV or Granisetron 1mg PO/IV
- Dexamethasone 20mg PO/IV

**Level B**

Day 1 DOCE
- Dexamethasone 8mg PO/IV (If not taken at home prior to treatment).
- May add Prochlorperazine 10mg PO/IV prn.

**ANTIEMETIC TAKE-HOME REGIMEN:**

**Level B/C**

Day 1 AC
- Ondansetron 8mg PO BID for 2-3 days, or Granisetron 1mg PO 12 hours post chemotherapy, then 2mg PO OD for 2-3 days
- Dexamethasone 8mg PO BID for 2-3 days
- Prochlorperazine 10mg PO q4-6h pm

**Level A**

Day 1 DOCE
- Prochlorperazine 10mg PO q4-6h pm

**PATIENT VISITS and APPOINTMENT TYPE:**

- Day 1 AC 1.5hr Type C
- Day 1 DOCE 2hr Type C

**ANCILLARY:**

- Oral hydration is strongly encouraged.
- Poorly hydrated patients may need more IV hydration.
- Inadequate total hydration may result in dose-related hemorrhagic cystitis.

**TOXICITIES:**

**Hematologic**

**AC Regimen:**
1. If AGC < 1.5 x 10^9/L, or if PLT < 100 x 10^9/L, HOLD chemotherapy for 1 week.

**Docetaxel Regimen:**
1. If AGC < 1.5 x 10^9/L, or if PLT < 100 x 10^9/L, HOLD Docetaxel dose for 1 week.

**Renal Failure**

**AC Regimen:**
1. If CrCL < 0.2mL/sec, OMIT Cyclophosphamide dose.
DOXORUBICIN-CYCLOPHOSPHAMIDE followed by
DOCETAXEL

Hepatic Dysfunction
AC Regimen:
1. If T.Bili = 26-51umol/L or AST= 60-180 IU/L, give 75% Doxorubicin dose.
2. If T.Bili = 52-85umol/L, or AST > 180 IU/L, give 50% Doxorubicin dose.
3. If T.Bili > 85umol/L, OMIT Doxorubicin.

Docetaxel Regimen:
1. Decrease Docetaxel dose if LFTs > 1.5 x normal.
2. If AST or ALT > 53 IU/L, or if Alk Phos > 180 IU/L, REDUCE dose by 50%.

SUGGESTED ACTION

CLINICAL MONITORING:
Doxo-Cyclo:
- Urinalysis (RBCs) routine for high intravenous doses; periodic for low IV dose and in response to patient complaint.
- Clinical exam for symptoms of CHF.
- Periodic cardiac tests for all patients with cardiac risk factors and patients at or above the threshold dose levels (Doxorubicin 450mg/m²).

Docetaxel:
- Clinical assessment of stomatitis; oral examination upon patient complaint of a sore mouth.
- Watch for symptoms of fever and infection.
- Skin assessment at each visit, including nails.

Skin Toxicity
4. Desquamation, ulceration, or necrosis

Fluid Retention
0. None 1. Mild peripheral edema 2. Pleural effusion, outpatient management
3. Pleural effusion, inpatient management 4. Intubation required

RATED AT EACH CLINIC VISIT

HYPERSENSITIVITY:
Docetaxel Hypersensitivity Procedures:
- If hypersensitivity reaction during administration:
  1. Discontinue Docetaxel immediately if there are signs or symptoms of moderate or severe hypersensitivity. (Mild symptoms may resolve with a decrease in the rate of infusion).
  2. Rapid IV administration of Diphenhydramine 50mg and Hydrocortisone 100mg.
  3. Re-initiate infusion after 30 minutes, or when signs of reaction are resolved. Resume infusion at a slower rate, then increase incrementally to the initial planned rate, eg. infuse at 30mL/hr (an 8-hour rate) for 5 minutes, then at 60mL/hr (a 4-hour rate) for 5 minutes, then at 125mL/hr (a 2-hour rate) for 5 minutes, then finally, resume at 250mL/hr (1-hour infusion rate).
  4. Depending on the intensity of the reaction, additional oral or IV pre-medication with an antihistamine should also be given for the next cycle of treatment and the rate of infusion should be decreased initially and then increased back to the recommended 1-hour infusion.

INTERNAL CODE:
OPIS CODES: AC/DOCE ORDER GROUP 1; AC/DOCE ORDER GROUP 2.

REFERENCES:
- CCO Practice Guideline 1-20:The Role of Taxanes in Neoadjuvant Chemotherapy for Women with Non-metastatic Breast Cancer

Date revised: Monday, October 24, 2005