**Epirubicin (Weekly)**
**Metastatic Breast Cancer**

**Background:** Weekly Epirubicin is a palliative treatment option for HER 2 negative metastatic breast cancer in anthracycline naïve patients (or cumulative anthracycline exposure > 600mg/m$^2$) with compromised liver or marrow function due to tumour infiltration and unsuitable for combination chemotherapy PS ≤ 2

**Patient Group:**

| HER 2 Negative metastatic breast cancer |
| No previous anthracycline or cumulative anthracycline exposure < 600mg/m$^2$ |
| No contraindication to anthracycline chemotherapy |
| ECOG PS ≤ 2 |

**Pre-treatment Assessment:**
Cardiac assessment and LVEF evaluation if clinically indicated
Tumour markers (CA 15-3)
Weight, FBC, U&E, LFTs and Creatinine clearance
Appropriate staging e.g. CT thorax, abdomen and pelvis if visceral disease
Record previous anthracycline therapy

**Treatment Threshold**
WBC ≥ 3.0 x 10$^9$/L
ANC ≥ 1.0 x 10$^9$/L
Platelets ≥ 75 x10$^9$/L
Bilirubin < 24 µmol/mL
AST/ALT < 2 x ULN

**Regimen Details:**

**Day 1**
Epirubicin 20mg/m$^2$ IV bolus administered over 3-5 minutes via tubing of a fast running IV infusion sodium chloride 0.9%

Repeated **every 7 days** for 12-18 cycles
Administration:
- Administration of epirubicin should be via the tubing of a free-running intravenous saline infusion after checking that the needle is properly placed in the vein. Care should be taken to avoid extravasation.

- **Extravasation** – Epirubicin extravasation may cause local pain, severe tissue lesions (vesication, severe cellulitis) and necrosis. Venous sclerosis may result from injection into small vessels or repeated injections into the same vein. Should signs or symptoms of extravasation occur during intravenous administration of epirubicin, the drug infusion should be immediately discontinued. The patient’s pain may be relieved by cooling down the area and keeping it cool for 24 hours. The patient should be monitored closely during the subsequent period of time, as necrosis may occur several weeks after extravasation occurs. A plastic surgeon should be consulted with a view to possible excision.

Pre-Meds: Ondansetron 8mg orally 30-60 minutes prior to chemotherapy

Anti-emetics: Moderate emetogenicity (no dexamethasone required)

Additional Medication: None required.

Monitoring and Assessment:
Clinical Assessment - prior to each treatment
Medical review – every 4 weeks or more frequently if indicated
Tumour markers – maximum 3 weekly
FBC - prior to each treatment
U&E, LFT creatinine clearance (calculated) – every 4 weeks
Echocardiogram (LVEF) as clinically indicated

Dose Modifications:

*Haematological toxicity*

Epirubicin should not be re-administered until the neutrophil count is ≥1.0 x 10⁹/L and the platelet count is ≥75 x 10⁹/L. (except in cases where the bone marrow is involved, in which case a lower platelet threshold is acceptable – please contact the prescriber)

Patients who experience severe neutropenia (neutrophil count <0.5 x 10⁹/l for a minimum of 7 days) should receive a dose reduction of 25% for subsequent courses.
Non Haematological Toxicity

For toxicities of up to grade 2 – omit treatment by one or more weeks until recovery to grade 0 or 1.
For grade 3 or 4 toxicities dose should be reduced by 25%. If patient continues to experience these reactions the treatment should be discontinued.

Renal Impairment

No dose modifications are necessary in moderate renal impairment, clinical decision where severe impairment exists.

Hepatic Impairment

Epirubicin is not recommended in severe hepatic impairment

<table>
<thead>
<tr>
<th>AST/ALT</th>
<th>Bilirubin µmol/L</th>
<th>Epirubicin</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-4 x ULN</td>
<td>24-51</td>
<td>50%</td>
</tr>
<tr>
<td>&gt;4 x ULN</td>
<td>51-85</td>
<td>25%</td>
</tr>
<tr>
<td>&gt;85</td>
<td>Omit</td>
<td></td>
</tr>
</tbody>
</table>

Pharmaceutical Care:
- Epirubicin doses should not exceed a cumulative dose of 900mg/m²
- Concurrent administration with cimetidine can increase plasma levels of epirubicin and should be discontinued before treatment with epirubicin.

Most Common Toxicities:
- Neutropenia +/- infection
- Irregular menstruation
- Anorexia
- Hot flushes
- Mucositis
- Fatigue
- Nausea +/- vomiting
- Diarrhoea
- Alopecia
- Phlebitis
- Red colouration of urine for 1-2 days post administration
- Erythema/ Rash
- Cardotoxicity
References:

1. SPC Epirubicin 2mg/mL solution for injection. Medac UK Ltd www.medicines.org.uk [accessed July 2014]


