CYTARABINE (ARA-C) HIGH DOSE

INDICATION

Consolidation chemotherapy for AML in remission.

Consider dose reduction to 1.5g/m$^2$ for patient ≥60 years old and for patient under 60 years old with co-morbidities at the discretion of clinician and as discussed at the MDT.

TREATMENT INTENT

Curative

PRE-ASSESSMENT

1. Confirm diagnosis
2. Pregnancy Test - for all women with childbearing potential before each new chemotherapy course.
3. ECG +/- Echo - if clinically indicated.
4. Record performance status (WHO/ECOG).
5. Record height and weight.
6. Consent - ensure patient has received adequate verbal and written information regarding their disease, treatment and potential side effects. Document in medical notes all information that has been given. Obtain written consent on the day of treatment.
7. Fertility - it is very important the patient understands the potential risk of infertility, all patients should be offered fertility advice (see fertility guidelines).
8. Hydration and tumour lysis prevention; refer to tumour lysis protocol.
10. Treatment should be agreed in the relevant MDT.
11. Central venous access should be used, e.g. Hickman line or PICC. In urgent cases it may be necessary to start chemotherapy via a peripheral cannula.

DRUG REGIMEN

Days 1, 3 and 5  CYTARABINE 3 g/m$^2$ * 12 hourly in 250 mL sodium chloride 0.9% intravenous infusion over 4 hours (6 doses).

*Consider dose reduction to 1.5g/m$^2$ for patient ≥60 years old and for patient under 60 years old with co-morbidities at the discretion of clinician and as discussed at the MDT.

This course should usually be given once counts have recovered to: Neutrophils > 1 x 10$^9$/L AND Platelets > 100 x 10$^9$/L.
DOSE MODIFICATIONS

Cytarabine - discuss with consultant

<table>
<thead>
<tr>
<th>Renal impairment</th>
<th>Hepatic impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High dose 1-3 g/m² consider</strong></td>
<td>Bilirubin &gt; 34 micromol/L: give 50% dose</td>
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<tr>
<td>GFR &lt; 60 mL/min: give 60% dose</td>
<td>Escalate doses in subsequent cycles in the absence of toxicity</td>
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<tr>
<td>GFR &lt; 45 mL/min: give 50% dose</td>
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<tr>
<td>GFR &lt; 30 mL/min: omit</td>
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</tbody>
</table>

INVESTIGATIONS

- FBC, Coagulation screen.
- U&E, LFT.

CONCURRENT MEDICATION

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose and duration</th>
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<tbody>
<tr>
<td>Aciclovir</td>
<td>200 mg three times a day for duration of treatment and for 3 months after completion</td>
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<tr>
<td>Proton pump inhibitor</td>
<td>As per local formulary</td>
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<tr>
<td>Fungal prophylaxis</td>
<td>According to local policy</td>
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<tr>
<td>Prednisolone 0.5 – 1% eye drops or Dexamethasone 0.1% eye drops (depending on local formulary)</td>
<td>One drop into each eye QDS. Continue for 5 days after cytarabine (due to risk of cytarabine-induced conjunctivitis). In the event of conjunctivitis consider increasing the frequency to 2-hourly until resolution of symptoms. Liaison with local ophthalmologists may be necessary in this situation</td>
</tr>
<tr>
<td>G-CSF</td>
<td>As per local policy.</td>
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(No allopurinol as this is consolidation.)

EMETIC RISK

Das 1-5: Moderate

ADVERSE EFFECTS / REGIMEN SPECIFIC COMPLICATIONS

Cytarabine: Nausea, diarrhoea, oral ulceration, hepatic dysfunction. A cytarabine syndrome is also recognised in which patients suffer from fever, myalgia, bone pain, occasional chest pains, maculopapular rash, conjunctivitis and malaise. It usually occurs 6 to 12 hours following administration.

EXTRAVASATION RISK

Cytarabine: neutral
TREATMENT RELATED MORTALITY

1-2%

REFERENCES


REVIEW

<table>
<thead>
<tr>
<th>Name</th>
<th>Revision</th>
<th>Date</th>
<th>Version</th>
<th>Review date</th>
</tr>
</thead>
<tbody>
<tr>
<td>H Eagleton</td>
<td>Review of pre-assessment, concurrent medications and mortality</td>
<td>Feb 2016</td>
<td>4.0</td>
<td></td>
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<tr>
<td>Cheuk-kie Cheung</td>
<td>Indication updated, general formatting</td>
<td>Apr 2017</td>
<td>4.1</td>
<td></td>
</tr>
<tr>
<td>Cheuk-kie Jackie Cheung, Haematology Pharmacist. NSSG Myeloid Group</td>
<td>Annual protocol meeting</td>
<td>Oct 2019</td>
<td>4.2</td>
<td>Oct 2021</td>
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