3 Multiple Myeloma

3.05 Protocol name: Cyclophosphamide Weekly (C weekly)

Indication
Initial treatment for patients in whom high dose therapy is not being planned. It is a suitable alternative to melphalan for patients with renal impairment or bone marrow suppression.

Pre-treatment Evaluation
- Document FBC (with film), plasma viscosity, U&E, creatinine, LFTs, calcium, glucose, serum free light chain measurements, serum protein electrophoresis and paraprotein quantitation, CRP, $\beta_2$-microglobulin and immunoglobulin levels.
- Urine for BJP (and formal evaluation of 24 hour urinary BJP excretion if light chain only myeloma).
- Bone marrow aspirate ± trephine (and cytogenetics if part of local protocol).
- Skeletal survey.
- Document height and weight and surface area.
- Consider ECG ± echocardiogram if clinical suspicion of cardiac dysfunction.
- Give adequate verbal and written information for patients and relatives concerning patient’s disease, treatment strategy and side effects.
- Obtain written consent from patient or guardian.
- Discuss issues relating to contraception and potential risk of infertility with patient and relatives (if applicable).

Drug Regimen  (OPCS code: X70.1)

<table>
<thead>
<tr>
<th>Days</th>
<th>Drug</th>
<th>Dose</th>
<th>Route</th>
<th>Administration</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cyclophosphamide</td>
<td>400mg/m²</td>
<td>PO</td>
<td>Bolus or short infusion</td>
<td>For 6 weeks after the first dose of Cyclophosphamide, then tailed off over 2 weeks</td>
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<tr>
<td>Alternate Days</td>
<td>Prednisolone</td>
<td>40mg/m²</td>
<td>PO</td>
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</tbody>
</table>

Considerations
- C-weekly should only be given to patients who can tolerate a daily fluid intake of 3 litres and whose serum creatinine is $<$600 µmol/l.

Cycle Frequency
- Weekly.
Dose Modifications

Cyclophosphamide:

<table>
<thead>
<tr>
<th>GFR (ml/min)</th>
<th>dose</th>
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<tbody>
<tr>
<td>10-50</td>
<td>75%</td>
</tr>
<tr>
<td>&lt;10</td>
<td>50%</td>
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</table>

Haematological dose reductions:
Efforts should be made to maintain full dosage and to give Cyclophosphamide every 7 days. If necessary, platelet support should be given.

Investigations prior to subsequent cycles
- FBC, U&E, creatinine, LFTs, calcium, paraprotein level or urinary protein/BJP excretion, plasma viscosity
- Reassess disease response (paraprotein level) every 2 weeks and then 6 weekly during plateau phase

Treatment Duration
- Treatment should be continued to either plateau phase (paraprotein level stable for 3 months) and then stopped, or until disease progression.

Concurrent Medication
- It is advised that an H₂-antagonist or PPI be given throughout treatment with prednisolone.
- Bisphosphonates
- Consider oral systemic anti-bacterial, anti-viral and/or anti-fungal prophylaxis as per local protocol.
- Consider Allopurinol 300mg (or 100mg if creatinine clearance <20mls/min) od po during the first month.

Anti-emetic
This regimen has moderate emetic potential.

Adverse Effects
See patient information

References

Patient Information


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Authorised by: WLCN Haematology TWG September 2009
Date for review by Haematology TWG: September 2010