Chemotherapy Protocol

MULTIPLE MYELOMA

Z-DEX-DEXAMETHASONE-IDARUBICIN

Regimen

- Multiple Myeloma – Z-DEX-Dexamethasone-Idarubicin

Indication

- First or subsequent line treatment of multiple myeloma suitable for intensive therapy or resistant to alkylator therapy.

Toxicity

Drug	Adverse Effect
Dexamethasone	Weight gain, GI disturbances, hyperglycaemia, CNS disturbances, cushingoid changes, glucose intolerance
Idarubicin	Cardiac toxicity, mucositis,

The adverse effects listed are not exhaustive. Please refer to the relevant Summary of Product Characteristics for full details.

Monitoring

- FBC, LFTs and U&Es every 3 weeks
- Paraprotein or light chains every 3 weeks
- Regular monitoring of blood glucose is considered good practice
- A baseline echocardiogram if there is clinical suspicion of cardiac dysfunction

Dose Modifications

The dose modifications listed are for haematological, liver and renal function and drug specific toxicities only. Dose adjustments may be necessary for other toxicities as well.

In principle all dose reductions due to adverse drug reactions should not be re-escalated in subsequent cycles without consultant approval. It is also a general rule for chemotherapy that if a third dose reduction is necessary treatment should be stopped.

Please discuss all dose reductions / delays with the relevant consultant before prescribing, if appropriate. The approach may be different depending on the clinical circumstances.

Haematological

Please note it is likely that myelosuppression prior to initial treatment in previously untreated patients will be a reflection of bone marrow infiltration.

As haematological toxicity is uncommon with dexamethasone dose modifications are not generally necessary.

Consider blood transfusion or erythropoietin if patient symptomatic of anaemia or has a haemoglobin of less than 8g/dL.

The neutrophil count must be greater than $1x10^9$/L and the platelet count greater than $75x10^9$/L before giving treatment. Treatment should be delayed until these levels are achieved unless they are considered to be due to bone marrow infiltration.

Hepatic Impairment

Bilirubin (umol/L)	Idarubicin Dose
20-50	50%
More than 50	Clinical decision

Renal Impairment

Idarubicin is contra-indicated where the GFR is less than 10ml/min.

Other

Dose reductions or interruptions in therapy are not necessary for those toxicities that are considered unlikely to be serious or life threatening. For example, alopecia, altered taste or nail changes.

Regimen

The dose of dexamethasone may be reduced to 20mg for those who are elderly, frail or fail to tolerate the dose.

21 day cycle for 8 cycles

Cycle 1

Drug	Dose	Days	Administration
Dexamethasone	40mg once a day	1, 2, 3, 4, 12, 13, 14, 15	Oral
Idarubicin	$10mg/m^2$/day	1, 2, 3, 4	Oral

Cycle 2 onwards

Drug	Dose	Days	Administration
Dexamethasone	40mg once a day	1, 2, 3, 4	Oral
Idarubicin	$10mg/m^2$/day	1, 2, 3, 4	Oral

Dose Information

- Dexamethasone is available as 2mg and 500mcg tablets
- Idarubicin is available as 5mg and 10mg capsules. Doses may be given on different days to ensure that the total idarubicin dose given over 4 days is close to the desired total of 40mg/m^2. Doses will be rounded to the 2.5mg to enable this.
- The total cumulative dose of idarubicin is 400mg/m^2.

Administration Information

- Dexamethasone should be taken in the morning, with or after food

Additional Therapy

- Allopurinol 300mg once a day for 7 days on cycle 1 only
- Anti-infective prophylaxis with
  - aciclovir 400mg twice a day oral
  - co-trimoxazole 960mg once a day on Monday, Wednesday and Friday only oral
  - fluconazole 100mg once a day oral
- Bisphosphonates in accordance with local policies
- Gastric protection with a proton pump inhibitor or a H_2 antagonist may be considered in patients considered at high risk of GI ulceration or bleed.

Coding

- Procurement – X70.4
- Delivery – X73.1

References

1. Cook g, Sharp RA, Tansey P et al. A phase I/II trial of Z-DEX (oral idarubicin and dexamethasone) an oral equivalent of VAD, as initial therapy at diagnosis or progression in multiple myeloma. Br J Haem 1996; 93: 931-934.

REGIMEN SUMMARY

Z-DEX-Dexamethasone-Idarubicin

Cycle 1

Take Home Medicines

1. Dexamethasone 40mg oral once a day in the morning on days 1, 2, 3 & 4 and 12, 13, 14 & 15
   Administration Instructions
   Please supply eight doses of dexamethasone; ONE dose to be taken on days 1, 2, 3 & 4 and 12, 13, 14 & 15.
   This may be dispensed as a single supply in one container or as separate supplies according to local practice.
   Take in the morning with or after food.

2. Idarubicin 10mg/m^2 on days 1, 2, 3, 4 oral
   Administration Instructions
   Idarubicin is available as 5mg and 10mg capsules. Doses may be given on different days to ensure that the total idarubicin dose given over 4 days is close to the desired total of 40mg/m^2. Doses will be rounded to the 2.5mg to enable this. Oral chemotherapy

3. Metoclopramide 10mg three times a day when required for the relief of nausea oral
   Administration Instructions
   When required for the relief of nausea. Please supply 28 tablets or nearest original pack size

4. Allopurinol 300mg once a day for 7 days oral
   Administration Instructions
   Take with or after food with plenty of water. Please supply 7 days.

5. Aciclovir 400mg twice a day for 21 days oral
   Administration Instructions
   Please supply 21 days or an original pack if appropriate.

6. Co-trimoxazole 960mg once a day on Monday, Wednesday and Friday only for 21 days oral
   Administration Instructions
   Co-trimoxazole 960mg once a day on Mondays, Wednesdays and Fridays. Please supply 21 days.
   This may be dispensed as 480mg twice a day on Mondays, Wednesdays and Fridays according to local practice.

7. Fluconazole 100mg once a day for 21 days oral

8. Gastric Protection
   Administration Instructions
   The choice of gastric protection is dependent on local formulary choice and may include;
   - esomeprazole 20mg once a day oral
   - omeprazole 20mg once a day oral
   - lansoprazole 15mg once a day oral
   - pantoprazole 20mg once a day oral
   - rabeprazole 20mg once a day oral
   - cimetidine 400mg twice a day oral
   - famotidine 20mg once a day oral
   - nizatidine 150mg twice a day oral
   - ranitidine 150mg twice a day oral

   Please dispense 21 days or nearest original pack size.

Cycle 2 onwards

Take Home Medicines

9. Dexamethasone 40mg once a day in the morning on days 1, 2, 3, 4 oral
   Administration Instructions
   Take in the morning with or after food.

10. Idarubicin 10mg/m^2 on days 1, 2, 3, 4 oral
    Administration Instructions
    Idarubicin is available as 5mg and 10mg capsules. Doses may be given on different days to ensure that the total idarubicin dose given over 4 days is close to the desired total of 40mg/m^2. Doses will be rounded to the 2.5mg to enable this. Oral chemotherapy.

11. Metoclopramide 10mg three times a day when required for the relief of nausea oral
    Administration Instructions
    When required for the relief of nausea. Please supply 28 tablets or nearest original pack size

12. Aciclovir 400mg twice a day for 21 days oral
    Administration Instructions
    Please supply 21 days or an original pack if appropriate.

13. Co-trimoxazole 960mg once a day on Monday, Wednesday and Friday only for 21 days oral
    Administration Instructions
    Co-trimoxazole 960mg once a day on Mondays, Wednesdays and Fridays. Please supply 21 days.
    This may be dispensed as 480mg twice a day on Mondays, Wednesdays and Fridays according to local practice.

14. Fluconazole 100mg once a day for 21 days oral

15. Gastric Protection
    Administration Instructions
    The choice of gastric protection is dependent on local formulary choice and may include;
    - esomeprazole 20mg once a day oral
    - omeprazole 20mg once a day oral
    - lansoprazole 15mg once a day oral
    - pantoprazole 20mg once a day oral
    - rabeprazole 20mg once a day oral
    - cimetidine 400mg twice a day oral
    - famotidine 20mg once a day oral
    - nizatidine 150mg twice a day oral
    - ranitidine 150mg twice a day oral

    Please dispense 21 days or nearest original pack size.

DOCUMENT CONTROL

Version	Date	Amendment	Written By	Approved By
1	May 2016	None	Dr Debbie Wright Pharmacist	Dr Mathew Jenner Consultant Haematologist

This chemotherapy protocol has been developed as part of the chemotherapy electronic prescribing project. This was and remains a collaborative project that originated from the former CSCCN. These documents have been approved on behalf of the following Trusts;

Hampshire Hospitals NHS Foundation Trust
NHS Isle of Wight
Portsmouth Hospitals NHS Trust
Salisbury Hospital NHS Foundation Trust
University Hospital Southampton NHS Foundation Trust
Western Sussex Hospitals NHS Foundation Trust

All actions have been taken to ensure these protocols are correct. However, no responsibility can be taken for errors that occur as a result of following these guidelines.