**Chemotherapy Protocol**

# HAIRY CELL LEUKEMIA

## PENTOSTATIN

### Regimen

- HCL – Pentostatin

### Indication

- Hairy cell leukaemia

### Toxicity

| Drug | Adverse Effect |
|---|---|
| Pentostatin | Myelosupression, rash, fever, lethargy, anorexia, alopecia, keratoconjunctivitis, renal toxicity |

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

Patients treated with pentostatin carry a lifelong risk of transfusion associated graft versus host disease (TA-GVHD). Where blood products are required these patients must receive only irradiated blood products for life. Local blood transfusion departments must be notified as soon as the decision to treat is made and the patient must be issued with an alert card to carry with them at all times.

### Monitoring

#### *Drugs*

- FBC, LFTs and U&Es prior to initiating treatment and before day one of each cycle

### Dose Modifications

The dose modifications listed are for haematological, liver and renal function and some 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*

No pre-treatment dose reductions or delays should be made for anaemia, neutropenia or thrombocytopenia.

Dosage reductions are not recommended during treatment in patients with anaemia and thrombocytopenia. Pentostatin should be temporarily withheld if the absolute neutrophil is less than $0.2x10^9$/L in a patient whose initial neutrophil count was greater than $0.5x10^9$/L and may be resumed when pre-dose levels are attained.

### *Hepatic Impairment*

No information available

### *Renal Impairment*

All dose reductions for renal impairment must be discussed with the relevant consultant before prescribing. Alternatives such as rituximab or interferon may be considered until renal function normalises. The following able acts as a guide for consideration of pentostatin only.

| Creatinine Clearance (ml/min) | Pentostatin Dose |
|---|---|
| more than 59 | $4mg/m^2$ |
| 40-59 | $3mg/m^2$ |
| 35-39 | $2mg/m^2$ |
| less than 35 | Not recommended |

### *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

**28 day cycle to complete response, then two additional doses, or stop after partial response at 12 months (6 cycles will be set in ARIA)**

| Drug | Dose | Days | Administration |
|---|---|---|---|
| Pentostatin | $4mg/m^2$ | 1, 14 | Intravenous bolus |

Pentostatin is administered every 14 days until a **maximum** response (e.g. normalisation of blood counts) has been achieved, a further 2 doses should then be given. On average ten doses are required.

If partial response (based on blood counts) not achieved after 4 doses, then the pentostatin should be discontinued.

## Dose Information

- Pentostatin will be dose banded according to the agreed national dose bands (2mg/ml)

## Administration Information

Extravasation

- Pentostatin – neutral

## Additional Therapy

- No antiemetics are required with pentostatin
- Pre and post hydration with sodium chloride 0.9% 500ml over 60 minutes
- Allopurinol 300mg once a day oral for 7 days oral (cycle 1 only)
- Anti-infective prophylaxis starting on day 6 and continued until the lymphocytes are above $1x10^9/L$
    - aciclovir 400mg twice a day oral
    - co-trimoxazole 960mg once a day on Monday, Wednesday and Friday only oral
- Mouthwashes according to local or national policy on the treatment of mucositis.
- 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 –
- Delivery –

References

1. Else M, Dearden CE, Matutes E et al. Long term follow up of 233 patients with hairy cell leukemia treated initially with pentostatin or cladribine at a median of 16 years from diagnosis. Br J Haem 2009; 145 (6): 733-740

**REGIMEN SUMMARY**

Pentostatin

## Cycle 1

### Day 1

1 Warning – Check blood transfusion status
Administration Instructions
Patients treated with pentostatin carry a lifelong risk of transfusion associated graft versus host disease.
Where blood products are required these patients must receive ONLY IRRADIATED BLOOD PRODUCTS for life.
Ensure transfusion departments are notified and the patient has been issued with an alert card

**2.** Sodium chloride 0.9% 500ml intravenous infusion over 60 minutes

**3.** Pentostatin 4mg/$m^2$ intravenous bolus

**4.** Sodium chloride 0.9% 500ml intravenous infusion over 60 minutes

### Day 14

**5.** Sodium chloride 0.9% 500ml intravenous infusion over 60 minutes

**6.** Pentostatin 4mg/$m^2$ intravenous bolus

**7.** Sodium chloride 0.9% 500ml intravenous infusion over 60 minutes

### Take Home Medicines (day 1 only)

8. Aciclovir 400mg twice a day for 28 days oral

9. Co-trimoxazole 960mg once a day on Monday, Wednesday and Friday for 28 days oral

10. Allopurinol 300mg once a day for 7 days oral

## Cycle 2, 3, 4, 5

### Day 1, 14

**11.** Sodium chloride 0.9% 500ml intravenous infusion over 60 minutes

**12.** Pentostatin 4mg/$m^2$ intravenous bolus

**13.** Sodium chloride 0.9% 500ml intravenous infusion over 60 minutes

**Take Home Medicines (day 1 only)**

14. Aciclovir 400mg twice a day for 28 days oral

15. Co-trimoxazole 960mg once a day on Monday, Wednesday and Friday for 28 days oral

## DOCUMENT CONTROL

| Version | Date | Amendment | Written By | Approved By |
|---|---|---|---|---|
| 1 | March 2017 | None | Dr Deborah Wright Pharmacist | Dr Andrew Duncombe 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.