Cladribine (2-Chloro-2'-deoxyadenosine, 2-CdA)

Indication
First line or relapsed hairy cell leukaemia (HCL)

ICD-10 codes
Codes with a prefix C91.40

Regimen details

Day	Drug	Dose	Route
1 to 5	Cladribine (LITAK®)	0.14mg/kg	SC
or			
1 to 7	Cladribine (LEUSTAT®)	0.09mg/kg/day	Continuous IV infusion

Note: There are 2 brands of cladribine with different routes of administration as above.

Cycle frequency
Normally once only, may be repeated at 6 months if CR not achieved.
Consider adding Rituximab if repeat course indicated.

Number of cycles
Usually once only

Administration
Sub-cutaneous:
The LITAK ® brand must be used. The dose must be administered by SC injection.

Intravenous:
The LEUSTAT ® brand must be used. The dose is administered in 500mL sodium chloride 0.9% over 24 hours, each day for 7 days (i.e. as a continuous infusion).

Pre-medication
Nil required

Emetogenicity
This regimen has low emetogenic potential.

Additional supportive medication
Allopurinol 300mg (100mg if creatinine clearance <20mL/min) OD for 7 days starting 24 hours prior to chemotherapy.
Antiviral, antifungal and PCP prophylaxis as per local policy. To commence on day 7 and to continue for 3 months.
Consider G-CSF as per local policy.

Extravasation
Cladribine is neutral (Group 1)

Pre-treatment evaluation

Investigation	Validity period
FBC*	7 days
U+Es (including creatinine)	7 days
LFT	7 days
LDH	7 days
Calcium	7 days
Magnesium	7 days
Glucose	7 days
Group and save	7 days
Direct Antiglobulin Test (DAT)	Baseline

Other pre-treatment investigations:
Hepatitis B and C and HIV 1 and 2 serology

*FBC weekly for the first 4 weeks and then as clinically indicated.

Inform patient and transfusion laboratory that they will require irradiated blood products for all future transfusions.

Standard limits for administration to go ahead

If blood results not within range, authorisation to administer **must** be given by prescriber/ consultant

Investigation	Limit
Neutrophils	See below
Platelets	See below
CrCl	> 50mL/min
AST/ALT	< ULN

Dose modifications

- **Haematological toxicity**

Patients may have haematological impairment as a manifestation of their disease. Following treatment further haematological impairment may occur before recovery of blood counts. Patients with severe bone marrow impairment should be closely monitored as further bone marrow suppression may occur.

- **Renal impairment**

LITAK is contraindicated if CrCl < 50mL/min.

LEUSTAT should be used with caution if CrCl < 30mL/min.

- **Hepatic impairment**

LITAK is contra-indicated in moderate to severe liver impairment (Child-Pugh score >6).

LEUSTAT should be used with caution in liver impairment.

Adverse effects - for full details consult product literature/ reference texts

- **Serious side effects**

Myelosuppression
Widespread maulo-papular rash
Neurotoxicity
Renal impairment

- **Frequently occurring side effects**

Myelosuppression
Fever
Erythematous rash
Constipation, diarrhoea
Fatigue
Cough
Myalgia, arthralgia
Injection site reactions

- **Other side effects**

Headache
Reduced appetite
Dizziness

Significant drug interactions – for full details consult product literature/ reference texts

Corticosteroids have been shown to enhance the risk for severe infections when used in combination with cladribine and should not be given concomitantly with cladribine

Additional comments

Rash most frequently seen when co-trimoxazole given at the same time as the cladribine.

Inform patient and transfusion laboratory that they will require irradiated blood products for all future transfusions. The need for irradiated blood products is indefinite following the administration of fludarabine.

Women of childbearing potential must be advised to use effective contraception during treatment and for 6 months after the last dose. In case of pregnancy during therapy with cladribine, the woman should be informed about the potential hazard to the foetus.

References

- Summary of Product Characteristics: Cladribine (LITAK®) 5 September 2018 via www.medicines.org.uk
- Summary of Product Characteristics: Cladribine (LEUSTAT®) accessed 5 September 2018 via www.medicines.org.uk
- British Committee for Standards in Haematology – Revised Guidelines for the Diagnosis and Management of Hairy Cell Leukaemia and Hairy Cell Leukaemia Variant. 2012. http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2141.2011.08931.x/abstract
- Saven et al; Blood (1998); 92: 1918 – 1926
- Von Rohr, A et al; Annals of Oncology (2002); 13: 1641 – 1649

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