

Chemotherapy Protocol

ACUTE MYELOID LEUKAEMIA

AmB- CYTARABINE (1500mg/m²)

Ambulatory Regimen

This regimen is for **AMBULATORY CARE** pathway use only

Regimen

- Acute Myeloid Leukaemia – AmB-Cytarabine (1500mg/m²)

Indication

- Consolidation for good risk acute myeloid leukaemia following induction chemotherapy.
- Relapsed disease post transplant.

Toxicity

| Drug | Adverse Effect |
|------------|---|
| Cytarabine | Nausea, vomiting, diarrhoea, fever, rash, itching, anorexia, oral and anal inflammation or ulceration, hepatic dysfunction, ocular pain, foreign body sensation, photophobia and blurred vision, dizziness, headache, confusion, cerebellar toxicity, myalgia and bone pain |

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

Monitoring

Drugs

- U&Es, LFTs and FBC prior to starting a cycle of treatment

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.

Haematological

In general the treatment can proceed if the neutrophils are greater than $1 \times 10^9/L$ and the platelets are greater than $100 \times 10^9/L$. Always check with the relevant consultant.

Consider blood transfusion if the patient symptomatic of anaemia or has a haemoglobin of less than 8g/dL (80g/L).

Hepatic Impairment

| Drug | Bilirubin μmol/L | | AST/ALT units/L | Dose (% of original dose) |
|------------|---------------------|--|--------------------|---|
| Cytarabine | greater than 34 | | N/A | 50% Escalate doses in subsequent cycles in the absence of toxicity |

Renal Impairment

| Drug | Creatinine Clearance (ml/min) | Dose (% of original dose) |
|------------|----------------------------------|------------------------------|
| Cytarabine | less than 60 | 60% |
| | less than 45 | 50% |
| | less than 30 | Discuss with consultant |

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

1 - 2 cycles (1 cycle will be set in ARIA of 28 days)

Cycle two, if required, should proceed when there is neutrophil and platelet recovery and the response to cycle one has been assessed.

| Drug | Dose | Days | Administration |
|------------|--|---|---|
| Cytarabine | 9000mg/m ² (6 doses of 1500mg/m ² every 12 hours) | 1500mg/m ² BD Every 12 hours at 9am and 9pm. 1, 3, 5 (6 doses in total) | Administer via CADD Solis VIP pump. Each CADD cassette contains a TWO doses (250ml total volume). Connect cassette and disconnect on day(s) stated as per patient schedule. Each dose: IV infusion of 1500mg/m ² in sodium chloride 0.9% over 240 minutes. |

Dose Information

- Cytarabine will be dose banded according to the national dose bands (100mg/ml)
- The daily doses should be given 12 hours apart
- When patients are older than 60 years, they should be considered for intermediate dose cytarabine at 1000mg/m² (days 1-5 as per AML 18).

Administration Information

CADD pump

- A total of 2 doses will be provided in one infusion cassette, to be administered as intermittent infusion via a CADD pump for the 5PM and 5AM dose.
- Therefore, the cassette will need changing between administration dates. This will be individual to the patient dose and will be outlined in their specific schedule.
-
- Sodium chloride 0.9% 100ml to be run as continuous infusion to keep CADD infusion line patent.
- Administer concurrently with cytarabine via Y-site with at 0.5 mL/hour on days 1 to 5. This infusion device should be disconnected and connected with each cytarabine CADD Cassette .

Extravasation

- Cytarabine – neutral (irritant in large volumes)

Other

- The daily doses of cytarabine should be given 12 hours apart.

Additional Therapy

This regimen is to be administered in the ambulatory setting.
Please refer to the schedule for each individual patient.

- Antiemetics

Starting 15 - 30 minutes prior to chemotherapy

- metoclopramide 10mg three times a day when required oral
- ondansetron 8mg twice a day for 7 days oral
- Aciclovir 400mg twice a day until neutrophils are greater than $1 \times 10^9/L$
- Discuss the need and choice of antifungal with a consultant
- Prednisolone eye drops 0.5% into each eye four times a day. Continue for 5 days after cytarabine administration
- Allopurinol 300mg daily for first 7 days of initial induction chemotherapy. This is not generally required where the cytarabine is being prescribed in the consolidation setting
- Mouthwashes according to local or national policy on the treatment of mucositis

- Gastric protection with a proton pump inhibitor or a H₂ antagonist may be considered in patients considered at high risk of GI ulceration or bleed.
- Supportive antimicrobials may be supplied with direction to only commence if and when directed by the haematology team when neutrophils below 0.5 x10⁹/L
 - Posaconazole 300mg once daily oral
 - Ciprofloxacin 250mg twice daily oral

References

1.Lowenberg B. Sense and nonsense of high dose cytarabine for acute myeloid leukemia. *Blood* 2013; 121: 26-28.

2.Dombret, H. and Gardin, C., 2016. An update of current treatments for adult acute myeloid leukemia. *Blood, The Journal of the American Society of Hematology*, 127(1), pp.53-61.

REGIMEN SUMMARY

AmB-Cytarabine (1500mg/m²)

Other than those listed below, supportive medication for this regimen will not appear in Aria as prescribed agents. Supportive care should be prescribed on ARIA and given to the patient on day 1.

Day 1

1. Ondansetron 8mg oral or intravenous
2. Metoclopramide 10mg oral or intravenous
3. **Warning – Cytarabine delivered via one CADD**
Administration Instructions
Cytarabine is administered TWICE a day at 12 hour intervals (1700 and 0500) via CADD pump. Sodium chloride infusion must be administered concurrently.
Always refer to the patient schedule for supportive treatments and fluids
4. **Cytarabine 3000mg/m² intravenous infusion in sodium chloride 0.9% as intermittent infusions via CADD pump**
Administration Instructions
The daily doses of cytarabine should be given 12 hours apart
One dose: Cytarabine 1500mg/m² in 120ml sodium chloride 0.9% over 240 minutes at 30ml/hour.
Each CADD cassette contains: 2 doses
Cytarabine is administered TWICE a day at 12 hour intervals (1700 and 0500) starting on days 1, 3, 5 (6 doses in total).
Connect cassette on day 1 and disconnect on day 2
5. **Sodium Chloride 0.9% 100ml continuous infusion at 0.5ml/hr.**
Administration Instructions
Sodium chloride 0.9% to be administered via folfusor pump at 0.5ml/hr on Days 1 to 6.
To be connected via Y-site with CADD pump to maintain line patency.
Disconnect folfusor at the same time as disconnecting CADD cassette
6. **Warning -Ensure take home medicines are supplied -Day 1 only**

Take home medicines -Day 1 only

7. Ondansetron oral 8mg twice daily for 6 days.
8. Metoclopramide oral 10mg up to twice a day in the afternoon and evening on day 1, on the first day of chemotherapy. Then take three times a day when required.
9. Aciclovir 400mg oral three times a day for 28 days
Administration Instructions Please supply 28 days or an original pack if appropriate.
10. Prednisolone 0.5% minims eye drops. Instil 1 drop into both eyes four times a day for 10 days.
11. Allopurinol 300mg once a day for 7 days oral
- (review cycle 2 or if consolidation treatment)
12. Nystatin 1ml four times a day
Administration instructions – please supply 1 x OP

13. Sodium Chloride 0.9% oral rinse 10mL four times a day -consider
Administration instructions – pharmacy please supply 50 x 10mL pods
14. Chlorhexidine Gluconate 10ml mouthwash oromucosal four times a day when required.
15. Gastric Protection -consider
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 supply 28 days or the nearest original pack size.
16. Ciprofloxacin 250mg twice daily oral -To be taken only once directed by your haematology team.
Please supply 28 days or the nearest original pack size.
17. Posaconazole 300mg once daily -To be taken only once directed by your haematology team.
Please supply 28 days or the nearest original pack size.

Day 3

1. Ondansetron 8mg oral or intravenous
2. Metoclopramide 10mg oral or intravenous
3. Warning – Cytarabine delivered via one CADD
Administration Instructions
Cytarabine is administered TWICE a day at 12 hour intervals (0900 and 2100) via CADD pump. Sodium chloride infusion must be administered concurrently.
Always refer to the patient schedule for supportive treatments and fluids
4. Cytarabine 3000mg/m² intravenous infusion in sodium chloride 0.9% as intermittent infusions via CADD pump
Administration Instructions
The daily doses of cytarabine should be given 12 hours apart
One dose: Cytarabine 1500mg/m² in 120ml sodium chloride 0.9% over 240 minutes at 30ml/hour.
Each CADD cassette contains: 2 doses
Cytarabine is administered TWICE a day at 12 hour intervals (1700 and 0500) on days 1, 3, 5 (6 doses in total).
Connect cassette on day 3 and disconnect on day 4
5. Sodium Chloride 0.9% 100ml continuous infusion at 0.5ml/hr.
Administration Instructions
Sodium chloride 0.9% to be administered via folfusor pump at 0.5ml/hr on Days 1 to 6.
To be connected via Y-site with CADD pump to maintain line patency.
Disconnect folfusor at the same time as disconnecting CADD cassette

Day 5

6. Ondansetron 8mg oral or intravenous

7. Metoclopramide 10mg oral or intravenous

8. Warning – Cytarabine delivered via one CADD

Administration Instructions

Cytarabine is administered TWICE a day at 12 hour intervals (0900 and 2100) via CADD pump. Sodium chloride infusion must be administered concurrently.

Always refer to the patient schedule for supportive treatments and fluids

9. Cytarabine 3000mg/m² intravenous infusion in sodium chloride 0.9% as intermittent infusions via CADD pump

Administration Instructions

The daily doses of cytarabine should be given 12 hours apart

One dose: Cytarabine 1500mg/m² in 120ml sodium chloride 0.9% over 240 minutes at 30ml/hour.

Each CADD cassette contains: 2 doses

Cytarabine is administered TWICE a day at 12 hour intervals (1700 and 0500) on days 1, 3, 5 (6 doses in total).

Connect cassette on day 5 and disconnect on day 6

10. Sodium Chloride 0.9% 100ml continuous infusion at 0.5ml/hr.

Administration Instructions

Sodium chloride 0.9% to be administered via folfusor pump at 0.5ml/hr on Days 1 to 6.

To be connected via Y-site with CADD pump to maintain line patency.

Disconnect folfusor at the same time as disconnecting CADD cassette

Always refer to the patient schedule for supportive treatments and fluids

DOCUMENT CONTROL

| Version | Date | Amendment | Written By | Approved By |
|---------|------------|------------------------|---------------------------------|--|
| 1 | April 2024 | New ambulatory regimen | Madeleine Norbury Pharmacist | Dr Christopher Dalley 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;

University Hospital Southampton 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.