

Guidance for giving Sub-Cutaneous Cytarabine to adults in community and Primary Care settings

Document History

Version	Date Issued	Summary of change
1	June 2007	Approved at the Network Governance Committee following the above clarification
1.1	4.02.08	This Guideline is subject to early review to further clarify lines of accountability where Cytarabine is prescribed 'off licence'
1.1	11.03.08	Prepared for review and re formatted
1.2	17.03.08	Reviewed by the Chemotherapy NSSG and approved following spelling amendments
2.0	08.05.08	Endorsed by the Governance Committee
2.1	08.08.11	Circulated at Chemotherapy NSSG Meeting
2.2	22.09.11	Reviewed and updated by Frances Shaw and Lara Barnish
2.3	16.11.11	Reviewed and updated by Frances Shaw
2.4	06.12.11	Prepared for discussion by Guidelines Sub Group
2.5	14.12.11	Reviewed by Guidelines Sub Group. Andrew Stanley to undertake final review and uptake specific sections
3.0	03.01.12	Review undertaken by Andrew Stanley and sections updated

Date Approved by Network Governance	January 2012
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Date for Review	January 2015
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Changes made between Version 1 and 2

AML 16 completed therefore reference to this removed.

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1. This guidance is has been produced to support the following:

The delivery of cytarabine sub cutaneous (SC) to patients who do not require admission to hospital for clinical reasons. It is aimed at DISTRICT NURSES and/or PRACTICE NURSES caring for patients who need sub-cutaneous injections of cytarabine to be administered in the community.

Patients may include those with AML or Myelodysplasia (RAEB or RAEBt) as prescribed by their consultant haematologists

<p>GUIDANCE FOR PATIENTS WHO SELF-ADMINISTER SHOULD BE SUPPLIED BY THE PATIENT'S PCT</p>

3. Background

- 3.1 The incidence of Acute Myeloid Leukaemia (AML) is 3/100,000 population. Key features are those of bone marrow failure due to marrow infiltration, these include:
- a) reduced red cells resulting in anaemia, shortness of breath and tiredness.
 - b) reduced platelets resulting in bruising and bleeding.
 - c) reduced/abnormal neutrophils resulting in increased susceptibility to infection.
- 3.2 Although AML can occur at any age, the average age of presentation is 65 years. The incidence of AML is expected to increase as the population ages.
- 3.3 Historically, people aged over 65 years have been under-represented in clinical trials for AML. However, the AML 14 trial showed an increased survival using low dose sub-cutaneous cytarabine compared with the oral agent hydroxyurea (hydroxycarbamide).
- 3.4 Low dose cytarabine is currently the gold standard for non-intensive treatment of AML in the elderly. Location of deliver varies according to access to community and primary care services which are essential for delivery and completion of the 10-day twice daily schedule.
- 3.5 Low dose cytarabine is given by sub-cutaneous injection twice daily (approximately 12 hours apart) for 10 consecutive days every 4 - 6 weeks for 4 courses or more, a total of about 80 home/surgery contacts.
- 3.6 These patients have a shortened life expectancy so many would prefer to spend their time at home and not attending the numerous hospital appointments

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associated with this regimen. Despite their poor prognosis these patients are well enough to be treated at home with access to transfusion support.

- 3.7 Underpinning this guideline is how DISTRICT NURSES/PRACTICE NURSES access 24 hour specialist advice to manage febrile neutropenia and other disease/treatment related problems. Further guidance on febrile neutropeia can be obtained from Pan Birmingham Cancer Network website (<http://www.birminghamcancer.nhs.uk/staff/clinical-guidelines/haematological-cancer>)

4. Guideline statements

- 4.1 Administration of sub-cutaneous cytarabine in community/primary care for complete or parts of each cycle of treatment should be considered for all patients.
- 4.2 Where community/primary care administration is agreed, patients and carers should be offered the opportunity to learn how to self-administer the drug.
- 4.3 Where patients and their carers decline this, the injection should only be undertaken by registered nurses who are competent and confident to perform the procedure.
- 4.4 Informed consent must be obtained by the prescribing doctor and patients should be given regimen and specific written information with full details of how to contact their local clinical haematology service.
- 4.5 All patients and community/primary care staff must have access to a haematology clinical nurse specialist.
- 4.6 As a minimum, all patients must have a full blood count at the beginning, middle and end of each cycle of treatment. The responsibility for arranging and interpreting these lies with the clinical haematology team.
- 4.7 A medical directive should be written by the consultant haematologist, registrar, staff grade or non-medical prescriber (e.g. CNS). This should include the following:
- a) date drug to be given or date of prescription
 - b) patient's name and date of birth
 - c) name of drug and dose
 - d) administration route and frequency of administration
 - e) duration of treatment
 - f) signature of practitioner

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- 4.8 Cytarabine may be prescribed as part of a clinical trial, or in some circumstances 'off trial' or outside of its licence, where the dose may differ. Where cytarabine is prescribed outside of a trial or its licence the prescription must be signed by the consultant haematologist or specialist registrar (who is responsible for the prescription of the course of treatment).
- 4.9 Each cycle should begin on a Monday, Tuesday or Wednesday so that only one weekend is included in the treatment cycle.
- 4.10 The drug and all equipment (gloves, apron, sharps bin, spillage kit) should be provided by the haematology unit.
- 4.11 The haematology team should give all patients copies of the Pan Birmingham Cancer Network guidelines for the handling and administration of cytotoxic drugs, cytotoxic spillage and neutropenia (available under the following titles:
- [Guidelines for the Administration of Anti-cancer Treatment](#)
 - [Guidelines for the Management of Spillage of Cytotoxic Drugs](#)
 - [Guidelines for the Management of Febrile Neutropenia](#).
- 4.12 The haematology team should give the patient written details of how to contact the clinical nurse specialist and the clinical haematology team (including what to do out-of-hours).
- 4.13 Injection sites should be rotated to prevent local irritation (Workman, 1997, Mallett & Dougherty, 2000). A standard sub-cutaneous injection technique should be applied.
- 4.14 The benefits of skin cleansing with an alcohol-impregnated swab is widely debated (Workman, 1999, Mallett & Dougherty, 2000 & Livermore, 2003). In view of the risk of skin irritation for this client group and the hardening of skin associated with the long-term use of swabs (Workman, 1999), these are not considered essential for this procedure. However, high standards of hand washing and asepsis should be observed.
- 4.15 Gloves and aprons should be worn during the procedure. Goggles and masks are not considered necessary as the medication is dispensed in pre-filled syringes.
- 4.16 Always use luer-lock syringes and **do not expel air bubble from syringe**.
- 4.17 Patients should be advised to store the drug in its sealed packaging on a low shelf in the fridge.

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- 4.18 Pre-filled syringes with small volumes of liquid reduce the risk of spillage. In the event of spillage however, follow the Network spillage guidelines which should be supplied to the patient. The key points in this are:
- a) if cytarabine comes into contact with the skin, or following a needle-stick incident, the area should be thoroughly washed with water
 - b) if cytarabine enters the eyes, they should be thoroughly irrigated with water and medical advice sought
 - c) always wear double gloves when dealing with spillages
 - d) wipe up any spillage with the absorbent wipes provided in the spillage pack, place in yellow bag and dispose of directly into cytotoxic sharps bin
 - e) any incidents should be reported using the appropriate incident reporting form and in the event of a needlestick injury, the Occupational Health Department should be informed
- 4.19 The patient should be asked to return the sharps bin and unused syringes to their local haematology unit at the end of each cycle. The spillage kit and any other equipment should be returned to the haematology unit at the end of the course of treatment. **DO NOT EMPTY SYRINGES.**

5. Criteria for further haematological advice\review

- 5.1 If the patient is pyrexial or has signs and symptoms of infection, the injection should be omitted and the patient referred to the haematology ward / day unit / A & E Department according to the agreed neutropenia policy.
- 5.3 If the patient reports pin-prick bruising (suggesting low platelet count) or is pale with increasing shortness of breath on exertion (suggesting anaemia) the injection should be given and the patient referred to the haematology ward/day unit for full blood count and assessment of transfusion requirements.

6. Monitoring of this guidance

Adherence to the Network guidelines may from time to time be formally monitored.

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