Blood cancers, chemotherapy and the risks of neutropenia

Haematological malignancies are a diverse set of conditions affecting the blood, bone marrow and lymphatic system and make up approximately 7% of all cancers in the UK. They include multiple myeloma, lymphomas and leukaemias.

They may be aggressive diseases that require treatment with intensive chemotherapy and can often be cured. They can also be less aggressive, low-grade conditions, which may not need treatment at diagnosis.

Haematology patients are often older people, with multiple comorbidities, and can present in a range of healthcare settings including orthopaedics, renal and cardiac care.

Although surgery (splenectomy) and radiotherapy have their place in treating haematological malignancies, these diseases are rarely confined to a single site and usually require systemic chemotherapy treatment. This can be given orally as an outpatient or intravenously as a day case, while the most intensive inpatient treatments are only given in specialist units.

Chemotherapy side-effects depend on the specific drugs used in each protocol, ranging from red or blue-coloured urine to neuropathy and constipation. The effects most commonly associated with chemotherapy are nausea, vomiting and alopecia.

Suppression of blood counts – in particular neutropenia, which brings a risk of life-threatening sepsis – is a risk with all chemotherapy and the biggest concern for this group of patients. Neutropenia is typically defined as a neutrophil count ≤0.5x10⁹/l. and usually occurs at around 7-10 days after chemotherapy.

Clinical nurse specialists meet patients at the time of diagnosis and are their point of contact. They give the patient information on diagnosis and treatment and on what to do if they are unwell.

5 key points

1. All patients on chemotherapy must be assessed for neutropenia or their risk of developing it. Signs of neutropenic sepsis are a temperature of ≥38°C or evidence of infection.
2. Pyrexia should never be ignored in neutropenia, even if the patient appears well.
3. If infection is suspected, the patient must be clinically assessed and intravenous antibiotics started within one hour.
4. Use reverse barrier nursing when caring for neutropenic patients to reduce infection risks. Handwashing and plastic aprons are recommended, while gloves and masks are not usually appropriate (check trust guidelines).
5. If a patient is neutropenic or likely to become so, four-hourly observations are essential day and night.

5 minute briefing

Haematological malignancies

An expert nurse advises on safe, effective care and when to contact a specialist nurse

Graeme Butters
North Bristol Trust

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WHEN TO CONTACT THE NURSE SPECIALIST

- If a patient requires hospital admission, even if the reason for this is not directly linked to their haematology problem.
- If you are unfamiliar with a diagnosis or treatment and need advice on patient care.
- If you have concerns about a patient’s ability to manage treatment or side-effects at home. Oral chemotherapy regimens can be complicated and difficult to manage. These drugs often cannot be dispensed in dosing aids. People who are older, isolated or very anxious may need additional support.
- If you require advice or assistance in the management of side effects or are unsure whether a problem is due to disease or to treatment.
- If you believe that a patient or their family need extra support or information, for example about a change in condition or coming to terms with a diagnosis.

GUIDANCE AND RESOURCES

These websites provide an introduction and accessible resources on haematological malignancies and treatments.
- Macmillan Cancer Support: www.macmillan.org.uk
- Myeloma UK: www.myeloma.org.uk
- The Lymphoma Association: www.lymphomas.org.uk
- Leukaemia and Lymphoma Research: www.beatbloodcancers.org.uk
- Cancer Research UK: www.cancerhelp.org.uk

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