**An audit of initial management of neutropenic sepsis**

**Descriptor:**

This audit will measure the local initial practice of neutropenic sepsis to assess quality of documentation, availability of protocols and the timely delivery of antibiotics.

**Background:**

Systemic infection in neutropenic patients is a potentially life threatening condition. Left unchecked it can rapidly prove fatal. Simple, timely intervention can be life saving. Prognosis for recovery is dependent on fast and appropriate treatment, as delay can result in the patient’s rapid deterioration into shock and potentially death.

The 2008 National Confidential Enquiry into Patient Outcome and Death (NCEPOD) study into the care of patients dying within 30 days of SACT raised significant quality and safety concerns [1]. Care was inadequate for patients readmitted with complications following SACT, especially for neutropenic sepsis. The diagnosis was often missed, and treatments were delayed. The 2009 National Chemotherapy Advisory Group (NCAG) report recommended actions to bring about a step change in the quality and safety of chemotherapy services, based on a care pathway model [2]. It was recognised that, in emergency, patients with oncology complications often access care via Emergency Departments. Key recommendations included: the establishment of an Acute Oncology Service (AOS) in all hospitals with Emergency Departments; clear and readily accessible policies for managing complications, including neutropenic sepsis, agreed across a Network; a target “door-to-needle” time of one hour for intravenous antibiotic delivery in neutropenic sepsis.

NICE are due to publish guidelines on the management of neutropenic sepsis in 2012. However, the inadequate care demonstrated in the NCEPOD report highlights the need to demonstrate current practice in cancer networks.

## The Cycle

**The standard:**

1. Clear and readily accessible policies and pathways on the management of neutropenic sepsis are available, which should be agreed across a Cancer Network

2. Comprehensive recording of clinical observations on initial assessment (Temperature, Heart rate, blood pressure, respiratory rate)

3. Blood cultures (peripheral and central if central catheter present), Full blood count, Urea and electrolytes, C-reactive protein and glucose should be taken after initial assessment with IV access obtained

4. Delivery of antibiotics occurs within one hour (i.e. “door to needle” times for intravenous antibiotics or “door to swallow” times for oral antibiotics) for patients presenting with neutropenic sepsis

5. Senior clinician review of patient within 24 hours

**Target:**

• 100% availability of policies and pathways on the management of neutropenic sepsis

• 100% of patients should have complete recording of observations on initial assessment

• 100% of patients have initial investigations taken

• 95% of patients should have appropiate antibiotics delivered within 1 hour of first presentation

• 100% of patients should have senior clincal review within 24 hours

## Assess local practice

**Indicators:**

• The indicator

1. Proportion of policies and pathways on the management of neutropenic sepsis available

2. Proportion of patients should have a complete recording of observations on initial assessment

3. Proportion of patients have initial investigations taken

4. Proportion of patients should have appropiate antibiotics delivered within 1 hour of first presentation

5. Proportion of pateints should have senior clincal review within 24 hours

**Data items to be collected:**

In addition to the data items required for the above indicators:

• DOB

• Sex

• Diagnosis

• Stage

• Aim of treatment

• Chemotherapy regime

• Length of admission

• Outcome

**Suggested number:**

An audit of patients admitted with neutropenic sepsis over 3 month period. Patients identified from triage daily log in A&E department, ward admission daily log and daily inpatient list.

**Suggestions for change if target not met:**

• Ensure policies are available in all clinical areas

• Education of all medical and nursing staff who may come into contact with patients receiving systemic anti- cancer treatment with the importance of timely delivery of chemotherapy

• Appropriate antibiotics available in all departments where chemotherapy patients may be assessed

• Introduction of a clinical pathway to improve documentation

• Re-audit in 12 months time

**Resources:**

- Personnel: Clinical director, audit lead, clinical oncologist, therapy radiographer

- Time: 12 hours to check records, review information and prepare report

**References:**

1. For better, for worse? A review of the care of patients who died within 30 days of receiving systemic anti-cancer therapy. National Confidential Enquiry into Patient Outcome and Death. November 2008
2. Chemotherapy Services in England: Ensuring quality and safety. A report from the National Chemotherapy Advisory Group. August 2009

**Editor's comments:**

This is an audit of local practise suitable to for a trainee to undertake.

**Submitted by:**

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