

Introduction

Background:

Neutropaenic sepsis is a potentially fatal complication of cytotoxic chemotherapy requiring rapid specialist input.

The national standard for management of neutropaenic sepsis is that all patients with suspected neutropaenic sepsis should receive antibiotics in <1hour from arrival at hospital (Peer Review Measure Acute Oncology Manual of Cancer Services).

Aim:

To audit the management of patients attending Royal Devon and Exeter Hospital with suspected neutropaenic sepsis and adherence to the 1 hour door to needle time target.

Standard

>90% of patients should receive antibiotics <1hr from arrival at hospital

Objectives:

- To assess the 1 hour door to needle time compared with the national standard
- To evaluate the use of the neutropaenic sepsis pathway and patient group directive (PGD) for nurse led prescribing/delivery of first dose antibiotics.
- To consider implications for the acute oncology service
- To consider if any particular chemotherapy regimens are associated with neutropaenic sepsis rates >20% in the adjuvant setting

Methods

- 1) Baseline Retrospective Review of Patient Notes 3 months**
 - The notes of all patients admitted with suspected neutropaenic sepsis between October 2012 and January 2013 were reviewed
 - Patient, chemotherapy and treatment details were collected
- 2) Initial Results were analysed**
- 3) An action Plan was produced**
- 4) Results were re-audited and door to needle time data continues to be collected prospectively in all patients and presented on a 3 monthly basis**

Results – 1 hour Door to Needle Time Baseline

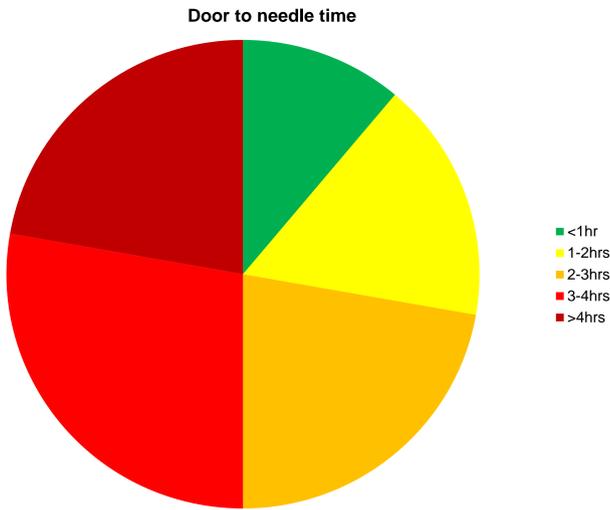
21 patients 22 admissions
Admission Ward:

- Yeo 18
- Cherrybrook Day Case 3
- AMU 2

<10% patients received antibiotics <1 hour
Proforma not used in any patients
Mean time to antibiotics 4 hours
30% Neutropaenic sepsis rate with adjuvant TC (Taxotere and Cyclophosphamide or carboplatin)
Median Length of Stay 5 days

1 neutropaenic related death

Figure 1: Time from Admission to Antibiotics Baseline



Action Plan

- **Appointment of Acute Oncology: Focus on education of junior doctors and nurses**
- **Re-launch of Neutropaenic sepsis Pathway and PGD**
- **Addition of prophylactic Pegfilgrstim (GCSF) with adjuvant TC**
- **Real time evaluation of service with individual feedback**

Results – 1 hour Door to needle time last 6 months

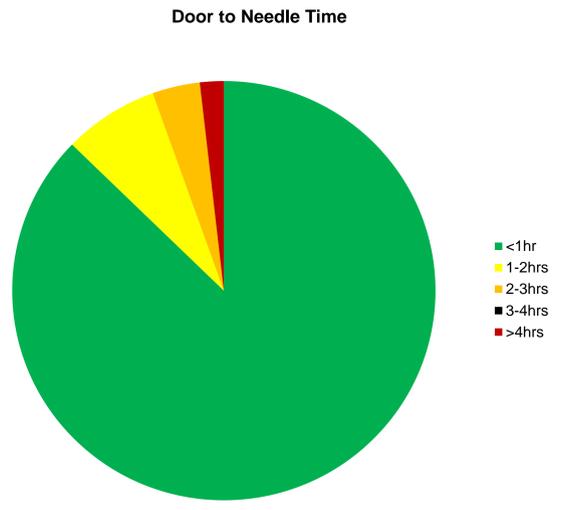
54 Patients
Admission Ward

- Yeo 20
- Cherrybrook Day Case Unit 24
- Yarty 10
- ED 1

87% Compliance 1 hr door to needle time
Proforma used in 52/55 patients

No ITU admissions
2 deaths (both palliative capecitabine (breast) 5FU, Cisplatin Cetuximab (head and neck))

Figure 2: Current door to needle time January-June 2014



Current Practice

- Neutropaenic Sepsis Guidelines Reviewed and Updated
- 2 acute oncology nurses monitoring and educating regarding neutropaenic pathway.

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