UHBristol Trustwide Neutropenic Sepsis Audit

Krishna Garadi
Julia Hardwick
Ruth Hendy
Anna Kuchel
Tara Shine
Sam Wells

Background

- *Cancer Peer Review measure for Acute Oncology*
- *Door to needle time for suspected neutropenic sepsis patients has been identified as poor in the past*
- *Patients can die from neutropenic sepsis*

Aim

- Identify at risk patients attending UHBristol who present with symptoms suggestive of neutropenic sepsis
- Identify time from arrival to antibiotic administration
- Compare with national guidelines (NICE)
- Suggest improvements where needed

Standards

From National Cancer Action Team, National Cancer Peer Review Programme: Acute Oncology

All patients (who are at risk) presenting with symptoms of neutropenic sepsis should receive intravenous antibiotics within 1 hour of arrival in hospital – 100%

Methodology

- 6 month audit period 1/9/12 – 28/2/13
- IM&T search for all patients admitted (anywhere in UHBristol) in that period with a primary or secondary diagnosis ICD10 code of D70X (neutropenia – not otherwise specified) or A419 (septicaemia, unspecified).
- This list was then manually filtered for patients with a cancer diagnosis and those that had received chemotherapy in the last 6 months.
- Paediatrics were excluded.

Results

- 55 episodes identified
- 5 episodes – insufficient data (2=unknown antibiotic administration time, 2=unknown antibiotic administration time and arrival time, 1=no information found for episode)
- 1 episode – patient neutropenic but presentation was such that antibiotics were inappropriate
- 5 episodes – patients not neutropenic and there was no reason that the admitting team would assume that they were

Results

- 44 episodes audited
- 2 episodes – blood tests carried out immediately on arrival or earlier that day therefore known not to be neutropenic when seen by triaging nurse/doctor

Results

42 episodes

Door to needle ≤ 1hour	Door to needle > 1hour
18 (3 of these had their antibiotics before admitting time) – 43%	24 – 57%

Results

- 3 out of 4 (75%) patients seen and assessed in Acute Care had DTNT ≤ 1 hour
- 9 out of 19 (47%) with oncology diagnosis had DTNT ≤ 1 hour
- 5 out of 13 (38%) with haematology diagnosis had DTNT ≤ 1 hour

Conclusions

- Much room for improvement
- Undertaking the audit was a challenge:
  - Identification of all patients that should be treated as per the trust neutropenic fever policy
  - Collecting patient arrival and antibiotic administration times – many not documented and Medway arrival times were used
  - Interpreting medical decisions retrospectively as to whether or not antibiotics were appropriate

Conclusions

- Continuous prospective audit required
- All but one of the patients coming through the BHOC Acute Care unit within working hours had a door to needle time of less than 1 hour.
  - This shows that a dedicated team of oncology nurses and doctors with appropriate training, skills and access to the right equipment can manage suspected neutropenic sepsis well.
  - The challenge is to ensure this happens out of hours on Ward 61 and across the trust.

Recommendations

- Consider laminating neutropenic sepsis policy and make available without access to computer in key areas (BHOC Acute Care, Ward 61 office and treatment room; ED and MAU)
- Ensure all emergency patients contacting BHOC and advised to come in are discussed with Acute Oncology NP or doctor (on call team out of hours) prior to their arrival
  - enables this person to look up last letter and access notes to know what to expect
  - This person should also be contacted immediately the patient arrives with observations so that they are prioritised and antibiotics prescribed as per protocol.

Recommendations

- New doctors/nurses ward admission proforma to enable prospective collection of data
- Consider using pre-packaged neutropenic sepsis kits with antibiotics/cannula/policy. Prospective audit pre and post this happening to assess if it makes a difference
- Education sessions for all BHOC/ED/MAU clinical staff on the potential risk to patients if there is a delay
- Quality improvement project by ward SHOs