PostScript Safety

NHS Greater Glasgow and Clyde

Issue 11, February 2012 • Produced by the Safer Use of Medicines Subcommittee of the Area Drug and Therapeutics Committee (ADTC)

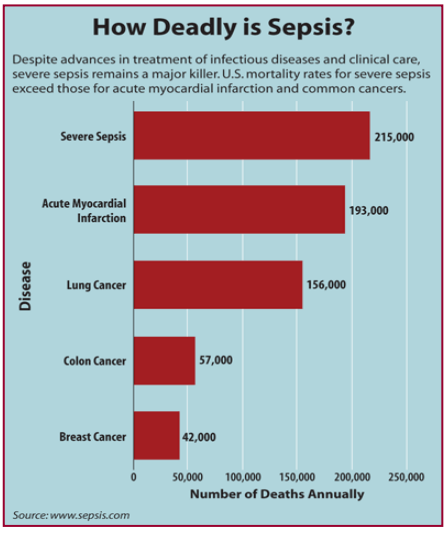
Sepsis is a Medical Emergency

Introduction

Sepsis is a life-threatening condition that arises when the body's response to an infection injures its own tissues and organs. It can lead to shock, multiple organ failure and death, especially if not recognised early and treated promptly. Sepsis can affect a person of any age, of any social background, and can strike irrespective of underlying medical conditions.

Sepsis claims 37,000 lives in the United Kingdom each year - more than lung cancer, and more than breast cancer, bowel cancer and HIV/AIDS combined.

There is significant mortality associated with sepsis (15% sepsis, 30% severe sepsis, 50% septic shock) and it remains one of the main causes of maternal mortality in the UK. Of interest, Hospital Acquired Infections contribute to approximately 50% of cases of sepsis.



Sepsis screening

Simple screening for sepsis and rapid intervention can save lives. For every 1 hour delay in the administration of antibiotics, mortality increases by 8%.

When the Early Warning Scoring System for adults hits ≥ 4 (or the patient has other clinical signs), screen for sepsis:

1. Do they have 2 or more of the following criteria?
   - Heart Rate > 90bpm
   - Temperature > 38°C or < 36°C
   - Respiratory Rate > 20 breaths/min or $PaCO_2$ <4.3kPA
   - White Cell Count > 12 or < 4 x 10^9/L
2. If yes, ask the question, "Does this patient have signs and symptoms suggestive of a new or worsening infection?"
3. If yes, complete the SEPSIS SIX within an hour

SEPSIS SIX

'SEPSIS SIX' (see box below) is a new SPSP initiative, for adults, to improve the management of Sepsis and will be introduced within NHSGGC from January 2012. Local SPSP co-ordinators will begin work to ensure that it is implemented reliably across all NHSGGC in-patient areas over the next year.

Delivery of the SEPSIS SIX within an hour is associated with a reduction in mortality from Sepsis. For this reason it is the recommended approach to Sepsis management in adults and should be used by all clinicians, irrespective of whether their clinical area is officially part of the SEPIS SIX SPSP bundle.

SEPSIS SIX – deliver the following within 1 hour of diagnosing Sepsis:

1. Deliver high-flow O_2 aiming for a SpO_2 of >98% or > 88% if known COPD.
2. Take Blood Cultures prior to antibiotics (but don't delay antimicrobials if infection is life-threatening e.g. suspected meningitis).
3. Prescribe and administer required antibiotics as per NHSGGC Empirical Infection Management Policy.
4. Measure serum Lactate and send Full Blood Count.
5. Start IV fluid resuscitation, up to 20ml/kg or a minimum of 250ml in an hour and reassess.
6. Commence accurate urine output measurement and consider catheterisation.

Please note: Source control should be considered in all patients with sepsis. Source control is the removal of the infective source, e.g. Removal of infected PVC or CVC, percutaneous drainage of collection, laparotomy for intrabdominal sepsis.

REMEMBER

Prescribe and administer antimicrobials within 1 hour of diagnosing Sepsis

Contact pharmacy immediately if you cannot source the antimicrobial injection.

Do NOT wait for routine orders to arrive

Many thanks to Prof Kevin Rooney, SPSP Fellow and Consultant Anaesthetist, Royal Alexandra Hospital, for producing this article on behalf of the Safer Use of Medicines Subcommittee.

Methotrexate News

In 2009, NHSGGC Area Drug & Therapeutics Committee endorsed a methotrexate 2.5mg tablet only policy. This was to reduce the risks of confusion and patient harm due to the availability and use of both a 2.5mg strength tablet and a 10mg strength tablet. Despite this, there has been significant ongoing use of methotrexate 10mg tablets across the organisation and there is evidence that this is still resulting in confusion for patients and staff with subsequent patient harm.

NHSGGC Primary Care has therefore agreed to introduce a voluntary ban on the use of the methotrexate 10mg tablet strength in adult patients from 1st February 2012. No new patients should be started on the 10mg strength tablet and existing patients will be switched onto the 2.5mg tablets only. From this date, hospital dispensaries will also only supply methotrexate 2.5mg tablets. The exception is Yorkhill Dispensary, which will continue to stock the 10mg strength tablet for paediatric patients.

Important: Changes to citalopram and escitalopram dosing

In November the MHRA issued a warning concerning the new lower dose recommendations and contra-indications for citalopram, due to the risk of a dose-dependent QT prolongation. To access NHSGGC guidance on this issue please use the link below

http://www.ggcprescribing.org.uk/media/uploads/ps_safety/citalopramqtguidance-ggc-nov2011.pdf

The MHRA have since also issued guidance on escitalopram (http://www.mhra.gov.uk/Safetyinformation/DrugSafetyUpdate/CON137769) and consequently the NHSGGC guidance is being updated (due for issue Feb 2012).

Enoxaparin: *Advice on Site of Administration*

It has come to light that in some clinical areas, enoxaparin prophylaxis is being administered in patients' arms, which is against the manufacturer's recommendations. The recommended and licensed route of enoxaparin administration is by deep subcutaneous injection, which should be alternated between the left and right anterolateral or posterolateral abdominal wall.
This is the route of administration that should be used for all patients, **except where good clinical reasons have been identified and approved at a Directorate level.**

If there are good clinical reasons why a particular patient or patient group cannot receive enoxaparin prophylaxis via the recommended route, then NHSGGC Thrombosis Committee and ADTC have endorsed administration of enoxaparin prophylaxis off-label into the anterior aspect of the thigh. There must be agreement at a Directorate level to support off-label use of enoxaparin in the specific patient group identified.

Contacts

For guidance and advice on reporting medicines incidents contact your Clinical Risk Manager or Pharmacist.
Comments and suggestions for future editions are welcome and we would also love to hear from you if you have any examples of good practice that you would like to share. Please email: catherine.mclaughlin@ggc.scot.nhs.uk

Update on Double Dipping

The September edition of Postscript Safety highlighted some good practice points concerning the practice of Double-Dipping, defined as inappropriate use of single-use or multi-use injections on multiple occasions. Subsequent feedback indicated some variation in practice across NHSGGC.
There is currently no NHSGGC policy on multi-use vials - the Safer Use of Medicines Committee has issued the following advice:

- The risk associated with sharing a multi-use vial between patients is cross-contamination, which can only occur if the syringe and / or needle is not changed in between patients.
- For this reason a practitioner using a single vial to administer a medicine to multiple patients should carefully consider the need to do so and be aware of this risk.
- Undertaking a risk assessment and administering the medicine under strict protocol is recommended (advice on risk assessment can be obtained from the contacts box). Practitioners must be familiar with the recommended storage and expiry date for the opened vial and the vial must be labelled with the date of opening and the expiry date.

The multiple-use of vials will be addressed during the review of the NHS GGC Safe and Secure Handling of Medicines Policy (Acute), due to commence in 2012. Any comments you wish to feed in to this review process are most welcome and should be sent via e-mail to:

sshm@ggc.scot.nhs.uk