Approved by Quality & Patient Safety Committee
21 August 2014

SEPSIS MANAGEMENT IN THE GYNAECOLOGICAL OR ONCOLOGICAL PATIENT

This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.

1. AIM

- Diagnosis and early treatment of sepsis in gynaecological and oncological patient

2. PATIENT

- Gynaecological, oncological or breast patient

3. STAFF

- Registered Nurses
- Medical staff

4. EQUIPMENT

- Observation taking equipment
- stethoscope
- IV trolley
- Blood cultures bottles- 2 sets (4 bottles)
- Urine dipstick

5. CLINICAL PRACTICE

- Consider the diagnosis of sepsis for a inpatient that has any RED ZONE observations or have two or more YELLOW ZONE observations.
- Take a thorough history specifically asking for symptoms of infection including altered mental state, rigors increasing abdominal pain or diarrhoea.
- Perform a thorough examination on mouth, chest, heart, wounds, abdomen (focal severe tenderness rebound, distention), limbs (signs of DVT) epidural and intravascular sites or any other possible sites of infection.
- Activate a PACE call if required to obtain a clinical review and commence the Sepsis pathway if appropriate.
- Obtain IV access and to **take two** sets of blood cultures and bloods for UECs, FBC,LFTs, coags, CRP, lactate, glucose and procalcitonin. A minimum of two sets of blood cultures (same time, different sites) are required to obtain enough blood to determine an organism.
- Ensure a venous lactate is taken in a gas tube or a grey topped tube sent on ice- an indicator of tissue hypo perfusion.
- **Prescribe 1st doses of antibiotics in the stat section on the medication chart, confirm the order with the Registered nurse and that the antibiotics are to be administered within the hour.**
- Prescribe and give fluid resuscitation with a fluid bolus of 250-500mls of 0.9% sodium chloride bolus stat: aim for SBP>100mmHg. If no response, repeat 250-500 as per sepsis pathway.
- Send swabs for culture of any suspected sites of infection e.g. wound, throat, vaginal peripheral or central line sites. Perform dipstick on specimen urine specimen for leukocytes and send specimens to lab for culture on urine faeces, sputum, or drains.
- Record all observations hourly with accurate fluid balance of all input and output after diagnosis
- Consult anaesthetic team and Consultants as required.
- Consider chest x-ray (CXR), abdominal ultrasound, CT scan or MRI according to the suspected focus of infection

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SEPSIS MANAGEMENT IN THE GYNAECOLOGICAL OR ONCOLOGICAL PATIENT cont'd

- Consult the Infectious Diseases team (Medical consults: pg 44408, Surgical consults: pg 44238)
    - Advice re antibiotics
    - If symptoms have not improved within 24 hours
    - For all patients with severe sepsis
    - All patients with bactereamia
    - Any patient with significant underlying immuno-compromise.
- Consider drainage of abdominal pelvic collections
- Consult with Surgical team urgently if necrotising fasciitis is suspected.
- Arrange admission to Acute Care Ward as required.
- Arrange review by Intensive Care (Prince of Wales Hospital) if the woman remains hypotensive despite resuscitation, or altered mental state or suboptimal response to interventions.
- Ensure the family are aware of the woman's condition.

6. DOCUMENTATION

- Medication Chart
- Integrated Clinical Notes
- Fluid Balance Chart
- Standard Adult Observation Chart

7. EDUCATIONAL NOTES

- **The importance of administering antibiotics within the first hour cannot be over emphasised. See Antibiotic administration chart in treatment rooms and administer antibiotics as per minimum administration time. Antibiotics are available in Acute Care or the After Hours Drug cupboard if not stocked on wards.**
- A single set (2 bottles) may miss up to 40% of bacteraemias/fungaemias and if only one set is taken and it is positive it could be the result of a contaminant (false positive result). Two sets showing growth makes it easier to eliminate the risk that a skin contaminant has been cultured. Taking blood from separate sites is a further aid.
- Tachypnoea, neutropenia and hypothermia are ominous signs
- Obesity, diabetes, impaired immunity, anaemia, history of infection, invasive procedures,

8. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE LOP

- Acute Care : admission criteria, process and management guideline
- Antibiotic Guidelines eTG 14th Edition
- eTherapeutic guidelines : http://proxy9.use.hcn.com.au/etg-penicillin.pdf
- Gentamicin dosing: http://proxy9.use.hcn.com.au/tgc/abg/7823.htm#7904ID_GL
- Patient with Acute Condition for Escalation (PACE): PD 208 Management of the Deteriorating Adult Inpatient
- CEC Adult sepsis intravenous antibiotic guideline adult inpatient

SEPSIS MANAGEMENT IN THE GYNAECOLOGICAL OR ONCOLOGICAL PATIENT cont'd

9. RISK RATING

- Moderate

10. REFERENCES

1 Clinical Excellence Commission, Sepsis Kill Program www.cec.health.nsw.gov.au/programs/sepsis Accessed May 2014

2 Kumar et al, 2006 Duration of hypotension before initiation of effective antimicrobial therapy is the critical determinant of survival in human septic shock*_Critical Care medicine_ vol.34, no.6.

REVISION & APPROVAL HISTORY

Gynaecology Services Division Management Committee 10/7/14

FOR REVIEW : AUGUST 2017

…./attachments

SEPSIS PATHWAY – ADULT + MATERNITY – INPATIENT

SEPSIS KILLS
RECOGNISE · RESUSCITATE · REFER

This pathway is intended for the recognition and immediate management of sepsis
Use relevant febrile neutropenia guidelines if the patient has haematology/oncology diagnosis

CLINICAL EXCELLENCE COMMISSION

RECOGNISE

DOES YOUR PATIENT HAVE A KNOWN OR SUSPECTED INFECTION?

Does your patient have any of the following sepsis risk factors, signs or symptoms present?

- ☐ History of fevers or rigors
- ☐ Cough/sputum/breathlessness
- ☐ Abdominal pain/distension
- ☐ Line associated infection/redness/swelling/pain
- ☐ Possible Chorioamnionitis
- ☐ Dysuria/frequency/odour
- ☐ New onset of confusion or altered LOC
- ☐ Recent surgery/cellulitis/wound infection
- ☐ Immunocompromised/chronic illness
- ☐ Possible Mastitis

Have a higher level of suspicion of sepsis for patients age > 65 years

PLUS

Does your patient have any RED ZONE observations or additional criteria?

NB: LACTATE ≥ 4mmol/L = Rapid Response

OR

Does your patient have TWO or more YELLOW ZONE observations or additional criteria?

YES

YES

NO

RESPOND & ESCALATE

Patient has SEVERE SEPSIS or SEPTIC SHOCK until proven otherwise

- Sepsis is a medical emergency
- Call for a Rapid Response (as per local CERS) unless already made
- Commence treatment as per sepsis resuscitation guideline
- Inform the Attending Medical Officer that your patient has sepsis

Turn over page for sepsis resuscitation guideline

Patient may have SEPSIS

- Obtain senior clinician review
- Call for a Clinical Review (as per local CERS) unless already made
- Look for other causes of deterioration
- Commence treatment as per sepsis resuscitation guideline
- Inform the Attending Medical Officer (as per local CERS)

Turn over page for sepsis resuscitation guideline

Look for other common causes of deterioration

New arrhythmia
Hypovolaemia/haemorrhage
Pulmonary embolus/DVT
Atelectasis
AMI
Stroke
Overdose/over sedation

- Initiate appropriate clinical care
- Repeat observations within 30 minutes AND increase the frequency of observations as indicated by the patient's condition
- Re-evaluate for sepsis if observations remain abnormal or deteriorate

Discuss management plan with patient and family

SEPSIS PATHWAY – ADULT – INPATIENT

SEPSIS RESUSCITATION GUIDELINE

RESUSCITATE & REASSESS

Adapt treatment to the patient's Resuscitation Plan if applicable

A

Maintain patent airway

B

Give oxygen
Aim SpO_2 ≥ 95% (or 88-92% for COPD & chronic type II respiratory failure)

C

Large bore intravenous access, collect and check results:

- ❑ Lactate
- ❑ Blood cultures x 2
- ❑ FBC
- ❑ Blood gas
- ❑ Coags
- ❑ LFTs
- ❑ EUC
- ❑ CRP
- ❑ Glucose
- ❑ Procalcitonin if available

Call for expert assistance after two failed IVC attempts

IV Fluid Resuscitation
Give initial 250-500mL 0.9% sodium chloride bolus STAT: aim for SBP > 100mmHg
If no response, repeat 250-500mL 0.9% sodium chloride boluses STAT until SBP > 100mmHg unless there are signs of pulmonary oedema

Escalate to Rapid Response if no response in SBP after 1000mL of fluid

PRESCRIBE and ADMINISTER ANTIBIOTICS WITHIN 60 MINUTES

Do not delay for investigations or results

If patient already on antibiotic therapy this **MUST** be reviewed by the Attending Medical Officer

D

Assess level of consciousness (LOC) using Alert, Verbal, Pain, Unresponsive (AVPU)
If V or less conduct a GCS
If P or U reassess Airway, Breathing and Circulation

E

Examine patient for source of sepsis
Collect appropriate swabs, cultures, chest X-ray, ECG if indicated

F

Fluid balance
Monitor and document fluid input & output - consider IDC
Maintain urine output ≥ 0.5 mL/kg/hour

G

Check Blood Glucose Level: if > 12mmol/L consider glycaemic control

MONITOR & REASSESS

Continue monitoring and assess for signs of deterioration:

- Respiratory rate in the Red or Yellow Zone
- SBP < 100mmHg
- Decreased or no improvement in level of consciousness
- Urine output < 0.5mL/kg/hour
- Increasing or no improvement in serum lactate

REFER

THIS PATIENT HAS SEVERE SEPSIS OR SEPTIC SHOCK
ESCALATION IN LEVEL OF CARE IS REQUIRED

This patient may need transfer to an Intensive Care Unit

- Discuss the patient's condition with the Attending Medical Officer
- Consider a higher level of care as per local CERS
- Discuss management plan with patient and their family/carers