Maternity Case 4: Case Study (Puerperal sepsis)

Facilitator Card

**Physiology**
Cytokines are the messengers that alert the body to fight infection. When they are released in a large scale inflammatory response such as puerperal sepsis this results in:

- **massive vasodilation and increased capillary permeability (leading to oedema)**
- **↓ BP due to decreased peripheral vascular resistance**
- **↑ temperature- Cytokines send a message to phagocytes which are the white blood cells that attack the infection**
- **↓ oxygen saturation can be caused by an increase in oxygen demand, ineffective transfer of oxygen to the blood stream, ineffective haemoglobin or ineffective breathing**
- **↓ urine output due to hypovolaemia and reduced tissue perfusion**
- **Elevated lactates due to hypoxia an anaerobic metabolism**

**Review** key points in Aruna’s care where ISBAR, MEWS scores or MET criteria could have altered the course of care for Aruna.

**Identify 3 things which you have learned from this case study which you will incorporate into your midwifery practice to recognise early deterioration of pregnant and postnatal women.**
Aim: To recognise and manage a deteriorating woman

Learning Objectives:
- Recognising the deteriorating patient
- Communicate effectively

Equipment:
- Facilitator Card
- Player 1 Card – Woman
- Player 2 Card - RM
- IV Cannula
- Medication Chart
- Blood Test results
- Observation chart
- Communication Card

Roles in the scenario
1. Woman
2. Registered Midwife
3. RMO
4. Obstetric Registrar
5. Optional extras:
   a. Additional Midwives
   b. Consultant
   c. Relative
   d.

To start the scenario:
1. Assign roles to each player
2. Set up room with woman in a bed
3. Give the first player card to the player designated as the woman
4. Give the second player card to the player designated as the RM
5. When the RM phones the RMO place the two players (RM & RMO) back to back to simulate communication via the phone.
6. Allow the scenario to build on itself prompting other players to enter as called for or prompt if necessary
7. Supply players with further information such as medication charts, observations or blood results when asked

Scenario
Aruna

UR 123457

Aruna is a 26 year old who had a baby boy 3 days ago but have remained in hospital due to some issues with breast feeding (the doctor had recommended she go home on Midcall).
She:
- was augmented in labour with syntocinon and an Artificial Rupture of membranes (ARM)
- had an epidural for pain relief
- subsequently had a forceps delivery with an episiotomy
- had an IDC in situ
- had a total of 5 vaginal exams (VE) 3 in labour.
- had a fever in labour and was given Paracetamol which brought the temperature down prior to transfer to the postnatal ward.

It is now day 3 of her stay, and she wakes feeling tired, trouble breast feeding and have had some shakes and epigastric pain during the night. She calls the midwife.

In handover it’s noted that 2 days ago she had been faecally incontinent and “could not hold onto her urine”. The RMO reviewed her then and suggested that her diarrhoea was secondary to laxatives and ceased them.

Her fundus was tender to palpate, her lochia is offensive and urine stained. At 0700, her vital signs are all within normal limits.
**During the scenario:**

**If the RM needs prompting:**

1. What questions/assessments would you ask the woman?
   - Assess Fundal tone/ check perineal suture.
   - Assess PV loss
   - Vital Signs- Maternity MEWS (inaccurate documentation, missing values)
   - General assessment – pale, diaphoretic, 
   - Apply Oxygen 6L HM
   - Urine Output – (no fluid balance chart)
   - 4 “T”s- Tone, Tissue, Trauma, Thrombin
   - Check birth summary for retained products or PPH

2. Who would you notify? Why?
   - T/L or CMC
   - Obstetric resident /registrar

**If the T/L or CMC needs states “don’t worry about it”**

- Continue above observations assessments
- Reiterate your concerns, use ISBAR
- Ensure notification to the RMO

**Facilitator should place RM and RMO back-to-back to simulate phone conversation**

In the phone call the RM should use ISBAR

**RMO/Registrar comes to review the woman:**

1. What information do you require?
   - Fundal tone, loss
   - Vital Signs
   - Brief history

2. What assessment would you do (Prioritise)?
   - ABC
   - PV loss (offensive lochia, leaking urine)
   - Visual inspection of the perineum
   - Assess pain
   - Fundal palpation (tender)
   - Pathology – Vaginal swab, MSU (not previously sent)
   - Bloods-FBC, UEC, CRP, LFT, BC
     - ↑ WCC
     - CRP not taken until deterioration occurred

**3. What is your management plan for this patient?**
   - Oxygen
   - IV access & IV fluids
   - IV antibiotics (broad spectrum)
   - IV fluids
   - Commence Fluid Balance
   - Monitor PVloss, pain, perineum
   - Frequent vital signs

**Who will you notify?**
   - Obstetric Registrar or Consultant

**Registrar/Consultant comes to review the woman:**

1. What information do you require from the RMO?
   - Assessment – est. blood loss, fundal tone, pv loss, pathology results
   - Vital Signs
   - Fluid balance
   - What treatment has been given so far

**Questions:**

1. What are your next actions as a group?
   - Notify family/Consultant
   - Ensure care of baby
   - Follow up cultures
   - Infectious disease review
   - Isolation precautions
   - Frequent observations
   - Repeat bloods
   - Continuing assessment of PVloss, pain and perineum

**To Summarise ask the group:**

1. What they thought went well?
2. What suggestions would they make to improve their roles?
3. Who else should have been notified:
   - Team Leader or CMC
   - Registrar/Consultant as MEWS=6
**Woman**

You are Aruna a 26 year old who had a baby boy 3 days ago but have remained in hospital due to some issues with breast feeding (the doctor had recommended going home on Midcall). Your labour was augmented with syntocinon and an ARM and you had an epidural for pain relief. You subsequently had a forceps delivery with an episiotomy and had an IDC in situ. You had a total of 5 vaginal exams (VE) 3 in labour. You also had a fever in labour and was given Paracetamol which brought your temperature down prior to transfer to the postnatal ward.

It is now day 3 of your stay, you wake feeling tired, are having trouble breast feeding and have had some shakes and epigastric pain during the night. You call the midwife.

**Player card**

**Midwife**

You are caring for Aruna and 4 other women on a busy morning shift in the postnatal ward. She is having some issues breastfeeding and so has remained in hospital. During the night she complained of epigastric pain which was not relieved by Mylanta and felt shaky. The night staff handover to you and suggests she has a review prior to discharge this morning.

In handover they also tell you that 2 days ago she had been faecally incontinent and “could not hold onto her urine“. The RMO reviewed her then and suggested that her diarrhoea was secondary to laxatives and ceased them.

Aruna (now Day 3) pressed the call button to tell you she is feeling unwell. Her fundus was tender to palpate, her lochia is offensive and urine stained. At 0700, her vital signs are all within normal limits. Worried, you ask the RMO to review her.

A few hours later when the RMO reviews Aruna he notes the abdominal discomfort, the painful perineum, the shakes, that she was febrile in labour and suggests that she goes home on midcall.

At 1230 you check Aruna’s vital signs and are worried by your findings so call the RMO to review her again.
## Pathology Results

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Case study 4 – Maternity – Aruna
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