ED QUICK QUIZ

WHAT IS THE DIAGNOSIS?

BACKGROUND

A 28 yr old African lady who doesn't speak much English presents to A&E in established labour. She is at 39 weeks gestation and this is her 3rd delivery. O/E the vertex is visible and you decide that you must deliver the baby in A&E.

After the delivery, the placenta delivers in 10 minutes, but the patient starts to loose quite a lot of blood. It is soaking through the sheet and dripping onto the floor of ED.

QUESTIONS

1. How would you decide whether to deliver the baby in the department?
2. How do you deliver a baby?
3. What is the post partum complication? How would you manage this?

ANSWERS & DISCUSSION

1. There are 3 stages of labour:
    - Stage 1 - Begins with regular contractions which increase in intensity and frequency. The cervix effaces(shortens) and dilates to 10cm, which is fully dilated.
    - Stage 2 - Full dilation, accompanied by a strong urge to push ends with delivery of the baby.
    - Stage 3 - Delivery of the placenta- usually 5-10 mins but can take up to 1 hour.

    The vertex of the baby's head is visible- these babies should be delivered in A&E

2. A to E assessment

    - Call obstetrics on call
    - Get the 'delivery tray'
    - Give entonox for pain
    - Use thumb and index finger to support perineum during contractions- the head will be delivered usually face towards mum's back. The face will then rotate 90 degrees to face mum's leg.
    - Support the head with your hands.
    - On the next contraction give some gentle downwards traction to deliver the anterior shoulder and then upward traction to deliver the posterior shoulder. The rest of baby should come out easily.
    - Dry baby and delay cord clamping for 2 minutes.
    - Put a hat on baby, wrap in a dry towel and give to mum if crying and changing to pink.
    - If concerned bring to the resuscitaire for assessment and resuscitation.
    - Allow placenta to deliver.

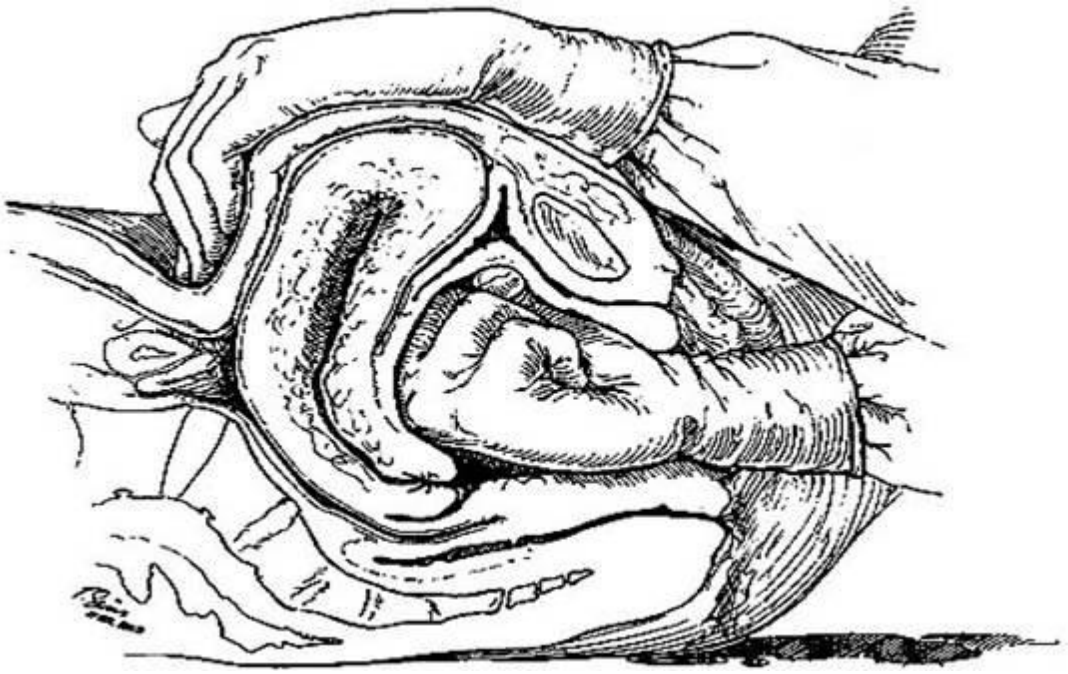
3. It appears mum is having a postpartum haemorrhage. This is defined as blood loss of more than 500mL from the female genital tract after delivery of the baby (or >1000mL after a caesarean section). Primary postpartum haemorrhage occurs within the first 24hours of delivery, whereas secondary postpartum haemorrhage occurs between 24hours and 12weeks after delivery and is less common.

    The causes of PPH can be remembered by the 4 Ts:
    TONE - poor tone of the uterine muscle accounts for approximately 80% of all women with excessive bleeding from the genital tract within 24 hours of delivery
    TEARs - to the genital tract
    TISSUE- retained placenta and membranes
    THROMBIN - coagulopathy

While awaiting help from our obstetric colleagues- we would start management of PPH by:

- Massaging the uterus- palpate the uterine fundus and rub it to stimulate contractions ('rubbing up the fundus')
- A to E assessment- Activate major haemorrhage protocol if needed. An obstetric shock index (that is, pulse rate divided by systolic blood pressure) of >1 has been shown to be associated with substantial postpartum haemorrhage and the need for intensive resuscitation and blood transfusion. An obstetric shock index of >1 would indicate the need for immediate action to ensure haemodynamic stability.

- Catheterise
- Oxytocin 5 iu by slow intravenous injection (may have repeat dose)
- Ergometrine 0.5 mg by slow intravenous or intramuscular injection (contraindicated in women with hypertension)
- Oxytocin infusion (40 iu in 500 ml isotonic crystalloids at 125 ml/hour) unless fluid restriction is necessary
- Other drugs that can be given - carboprost 0.25 mg by intramuscular injection repeated at intervals of not less than 15 minutes to a maximum of eight doses (use with caution in women with asthma) and misoprostol 800 micrograms sublingually.
- If drugs fail to stop the bleeding or are not available , bimanual compression should be performed. A gloved fist in put into the vagina and other hand placed on the fundus of the uterus externally to compress uterus between both hands



Bimanual compression

Below is an algorithm for management of PPH- we would do the HAEMO part initially.
Haemostasis algorithm has been introduced to help with the management of PPH.

"HAEMO" refers to the immediate measures to be taken to arrest haemorrhage, while "STASIS" represents the more advanced measures (box 1).

Box 1: HAEMOSTASIS algorithm for management of postpartum haemorrhage[16]

H—Ask for help and hands on uterus (uterine massage)

A—Assess (that is, ABC) and resuscitate (that is, intravenous fluids)

E—Establish aetiology, ensure availability of blood, and ecbolics (drugs that induce contractions of the uterus, oxytocin or ergometrine)

M—Massage the uterus

O—Oxytocin infusion (10 U/hour) or intramuscular prostaglandins (250 µg)

S—Shift to theatre with aortic compression or bimanual compression

T—Tamponade by balloon or uterine packing after exclusion of retained tissue and trauma. Administer

intravenous tranexamic acid (1 g)

A—Apply compression sutures on the uterus (B-Lynch or modified technique)

S—Systematic pelvic devascularisation (uterine, ovarian, quadruple. or internal iliac)

I—Interventional radiology and, if appropriate, uterine artery embolisation

S—Subtotal or total abdominal hysterectomy

Thankfully, in this case bleeding stops after uterine massage and 5 IU of oxytocin and 500ml of IV saline is given to replace losses. Mum and baby are well and transferred to obstetrics.

References

1. St-Mungo ED website O+G
2. CLINICAL UPDATES Diagnosis and management of postpartum
Haemorrhage Edwin Chandraharan et al. BMJ 2017;358:j3875
3. RCOG. Postpartum Haemorrhage, Prevention and Management (Green-top Guideline No. 52) Published: 16/12/2016