Surgical Care at the District Hospital
12

Bleeding in Pregnancy and Childbirth

Key Points
12.1 Bleeding

• Bleeding causes one in four maternal deaths worldwide

• Prevent anaemia, recognize and treat complications early

• Post partum bleeding is the most common cause of maternal death

• Practise active management of the third stage of labour in all cases to prevent postpartum haemorrhage.
12.1 Bleeding

Postpartum Hemorrhage

• Postpartum haemorrhage (PPH) is vaginal bleeding in **excess of 500 mL** after childbirth.

• A woman with a normal haemoglobin level will tolerate blood loss that would be fatal for an anaemic woman.

• Bleeding may occur at a slow rate over several hours and the condition may not be recognized until the woman suddenly enters shock.
12.1 Bleeding

Postpartum Hemorrhage

• Risk assessment in the antenatal period does not effectively predict those women who will have PPH.

• Practise active management of the third stage of labour on all women in labour since it reduces the incidence of PPH due to uterine atony.

• Closely monitor all postpartum women to determine those that have PPH.
12.1 Bleeding

Atonic Uterus

- Bleeding occurs from the placental site after delivery.

- Blood vessels in the placental site are surrounded by uterine muscles, which normally contract after delivery and close off the vessels.

- Failure of the uterus to contract (atonic uterus) results in excessive bleeding. This is the commonest cause of bleeding after childbirth.
12.2 Diagnosis & Initial Treatment

• Active management of the third stage of labour includes:
  
  - Giving an oxytocic to the mother as soon as the baby is born
  
  - Delivery of the placenta by controlled cord traction
  
  - Uterine massage to ensure that the uterus is contracted.
12.3 Specific Management

Abruptio Placentae

• In every case of abruptio placentae, be prepared for postpartum haemorrhage:

1. Assess clotting status using a bedside clotting test. Failure of a clot to form after 7 minutes or a soft clot that breaks down easily suggests coagulopathy.
2. Transfuse as necessary.
3. If bleeding is heavy (evident or hidden), deliver as soon as possible.
4. If the cervix is fully dilated, deliver by vacuum extraction.
5. If vaginal delivery is not imminent, deliver by caesarean section.
12.3 Specific Management

Abruptio Placentae

- If bleeding is light to moderate (the mother is not in immediate danger), the course of action depends on the fetal heart sounds:
  - If fetal heart rate is normal or absent, rupture the membranes with an amniotic hook or a Kocher clamp
  - If contractions are poor, augment labour with oxytocin
  - If the cervix is unfavourable (firm, thick, closed), perform a caesarean section
  - If the fetal heart rate is less than 100 or more than 180 beats per minute: Perform rapid vaginal delivery. If vaginal delivery is not possible, deliver by immediate caesarean section.
12.3 Specific Management

Coagulopathy (Clotting Failure)

• It can be triggered by many causes, including:
  – Abruption
  – Sepsis
  – Fetal death
  – Eclampsia
  – Amniotic fluid embolism.

• The clinical picture ranges from major haemorrhage, with or without thrombotic complications, to a clinically stable state that can be detected only by laboratory testing.

• In many cases of acute blood loss, the development of coagulopathy can be prevented if blood volume is restored promptly by infusion of IV fluids.
12.3 Specific Management

Placenta Previa

If you suspect placenta previa, do not perform a vaginal examination unless preparations have been made for immediate caesarean section.

Figure 12.1
12.3 Specific Management

Atonic Uterus

- An atonic uterus fails to contract after delivery.
  - Continue to massage the uterus.
  - Use oxytocic drugs which can be given together or sequentially.
  - Anticipate the need for blood early and transfuse as necessary.

- Do not give prostaglandins intravenously. They may be fatal.
12.3 Specific Management

Atonic Uterus

• If bleeding continues:
  
  – Check the placenta again for completeness
  
  – If there are signs of retained placental fragments (absence of a portion of maternal surface or torn membranes with vessels), remove remaining placental tissue
  
  – Assess clotting status using a bedside clotting test; failure of a clot to form after 7 minutes or a soft clot that breaks down easily suggests coagulopathy
12.3 Specific Management

Atonic Uterus

- If bleeding continues in spite of management above: Perform bimanual compression of the uterus and maintain compression until bleeding is controlled and the uterus contracts.
12.3 Specific Management

Atonic Uterus

Alternatively, compress the aorta

Figure 12.4
12.3 Specific Management

Atonic Uterus

• If bleeding continues in spite of compression, perform uterine and utero-ovarian artery ligation;

• if life-threatening bleeding continues after ligation, perform subtotal hysterectomy.

• Packing the uterus is ineffective and wastes precious time
12.3 Specific Management

Retained Placenta

1. If you can see the placenta, ask the woman to push it out.

2. If you can feel the placenta in the vagina, remove it.

3. Ensure that the bladder is empty. Catheterize the bladder, if necessary.

4. If the placenta is not expelled, give oxytocin 10 units IM if not already done for active management of the third stage.

5. **Do not give ergometrine** because it causes tonic uterine contraction, which may delay expulsion.
12.3 Specific Management

Retained Placenta

• If the placenta is undelivered after 30 minutes of oxytocin stimulation and the uterus is contracted, attempt controlled cord traction.

• Avoid forceful cord traction and fundal pressure as they may cause uterine inversion.

• If controlled cord traction is unsuccessful, attempt manual removal of placenta. Very adherent tissue may be placenta accreta. Efforts to extract a placenta that does not separate easily may result in heavy bleeding or uterine perforation which usually requires hysterectomy.
12.3 Specific Management

Retained Placenta

• If bleeding continues, assess clotting status using a bedside clotting test. Failure of a clot to form after 7 minutes or a soft clot that breaks down easily suggests coagulopathy.

• If there are signs of infection (fever, foul-smelling vaginal discharge), give antibiotics as for endometritis.
12.4 Procedures

Manual Vacuum Aspiration

• Dilatation is needed only in cases of missed abortion or when products of conception have remained in the uterus for several days:

• Gently introduce the widest gauge suction cannula

• Use graduated dilators only if the cannula will not pass; begin with the smallest dilator and end with the largest dilator (usually 10–12 mm) that ensures adequate dilatation

• Take care not to tear the cervix or to create a false opening.
12.4 Procedures

Manual Vacuum Aspiration

Begin with the smallest dilator and end with the largest dilator (usually 10–12 mm) that ensures adequate dilatation (Figure 12.5)
12.4 Procedures
Manual Vacuum Aspiration

- While gently applying traction to the cervix, insert the cannula through the cervix into the uterine cavity just past the internal os.
- Rotating the cannula while gently applying pressure often helps the tip of the cannula pass through the cervical canal.
12.4 Procedures

Manual Vacuum Aspiration

- Release the pinch valve(s) on the syringe to transfer the vacuum through the cannula to the uterine cavity.
- Evacuate remaining contents by gently rotating the syringe from side to side (10 to 12 o’clock) and then moving the cannula gently and slowly back and forth within the uterine cavity.
12.4 Procedures

Dilatation and Curettage
12.4 Procedures

Culdocentesis

Figure 12.10
12.4 Procedures

Colpotomy

Figure 12.11
12.4 Procedures
Salpingectomy for Ectopic Pregnancy

Figure 12.12
12.4 Procedures

Manual Removal of Placenta

Figure 12.13
Figure 12.14
12.4 Procedures

Repair of Cervical Tears

Figure 12.15
Four degrees of tear can occur during delivery:

- First degree: Vaginal mucosa + connective tissue
- Second degree: Vaginal mucosa + connective tissue + muscles
- Third degree: Complete transection of the anal sphincter
- Fourth degree: Rectal mucosa also involved
12.4 Procedures
Repair of First and Second Degree Tears
12.4 Procedures

Repair of Third and Fourth Degree Tears

Figure 12.20

Figure 12.21
12.4 Procedures

Uterine Inversion

Figure 12.22
12.4 Procedures

Uterine & Utero-Ovarian Artery Ligation

Figure 12.23
12.4 Procedures
Subtotal (Supracervical) Hysterectomy