

Postpartum Haemorrhage

Primary Postpartum Haemorrhage

Definition: a blood loss of 500ml or more, from the genital tract within 24 hours of the delivery of the baby.

Classification:

- Minor: loss of 500–1000ml of blood
- Major: more than 1000ml of blood
- This can be further subdivided into Moderate (1000–2000ml) or Severe (>2000ml).⁽¹⁾

Aetiology:

- Atony: including retained placenta (90%)⁽²⁾. Contraction of the uterus in the third stage of labour causes compression of the intramyometrial blood vessels and bleeding normally settles. If there is uterine atony, this compression does not occur. Precipitating factors for uterine atony include: macrosomia, multiple pregnancy, polyhydramnios, long 2nd stage of labour
- Trauma: ~7%. Bleeding may come from an episiotomy, a vaginal or cervical laceration, or a rupture of the uterine wall. Lacerations are more common after instrumental delivery.
- Coagulation Problems: usually disseminated intravascular coagulation (DIC). ~3%.

Epidemiology: Obstetric haemorrhage is no longer a major cause of maternal death in the UK. In the 2006–2008 report of the UK Confidential Enquiries into Maternal Deaths, haemorrhage was the sixth highest direct

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cause of maternal death; a rate lower than the 2 previous triennia⁽³⁾. Most studies quote an incidence of around 5%.⁽⁴⁾

Risk Factors:

- Related to Pregnancy: antepartum haemorrhage in current pregnancy, placenta praevia (x15 risk), multiple pregnancy, pre-eclampsia or pregnancy induced hypertension, previous PPH, nulliparity.
- Related to Delivery: emergency caesarean section (x9 risk)⁽⁵⁾, elective caesarean section, retained placenta, mediolateral episiotomy, operative vaginal delivery, labour of >12hours
- Pre-existing Maternal Conditions: Haemophilia A or B carrier, Von Willebrand's Disease.

Clinical Presentation:

- Continuous bleeding which fails to stop after the delivery of the placenta. Usually obvious but occasionally an atonic uterus can fill up without obvious external loss.
- Signs of shock (e.g. tachycardia, hypotension), pallor.

Investigations:

- Thorough examination of the lower genital tract, may require anaesthesia.
- FBC, clotting screen, crossmatch
- Hourly urine output
- Continuous pulse and blood pressure monitoring
- Make a rough but realistic estimate of volume lost.

Management: (get help from senior) Always manage women with an ABC approach

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- If uterus is atonic, a contraction can be 'rubbed up' by abdominal massage. A bimanual examination can also be tried.
- I.V. access with 2 wide-bore cannulae. Bloods: haemoglobin, haematocrit, platelets, clotting and crossmatch (number of units depending on estimated loss).
- Syntocinon 10IU stat i.v. should be given, followed by a Syntocinon infusion.
- Crystalloid and/or colloid should be rapidly infused to maintain circulating volume. A catheter should be inserted to help compress and contract the uterus and measure urine output.
- If placenta has not been delivered – gentle cord traction can be tried. If still retained a regional block or GA will be required for manual removal.
- Further oxytocics may be given if necessary: Syntocinon i.v., ergometrine i.m, carboprost i.m, misoprostol rectally ⁽⁶⁾.
- Most hospitals now have a 'massive obstetric haemorrhage' protocol, which should be used if above measures have failed. This 'code' will alert the haematology and transfusion labs, call a porter and alert the anaesthetic and theatre staff of the situation.

If haemorrhage continues:

- Central venous pressure line should be considered, blood transfusion commenced.
- Coagulation defects of DIC should be corrected with fresh frozen plasma or cryoprecipitate.
- Techniques to stop haemorrhage: a B-Lynch suture of the uterus to maintain compression, balloons inserted into the uterus to apply pressure to the placental bed, Internal iliac artery ligation may be

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suitable in atony, radiological direct arterial embolisation is also an option.

- Hysterectomy may be indicated if there is a non-lower segment uterine rupture or placenta accreta ⁽⁷⁾.

Prevention: It is important to treat anaemia in the antenatal period, particularly if the woman has risk factors for postpartum haemorrhage with oral ferrous sulphate or even an intravenous infusion of iron e.g. cosmofer. Active management of the 3rd stage of labour is associated with lower incidence of postpartum haemorrhage. Prophylactic oxytocics should be used as they decrease the risk of PPH by 60%⁽⁸⁾.

Secondary Postpartum Haemorrhage

Definition: abnormal or excessive bleeding from the birth canal between 24 hours and 12 weeks postnatally⁽⁹⁾.

Aetiology:

- Infection: Endometritis. 1–3% after spontaneous vaginal delivery. Risk factors: Caesarean section, prolonged rupture of membranes, severe meconium staining in liquor, manual removal of placenta, maternal anaemia.
- Retained Products of Conception

Investigations: FBC, blood cultures, check MSU, high vaginal swab – gonorrhoea/Chlamydia, USS

Management:

- Speculum examination: allow visualisation of the cervix and lower genital tract to exclude lacerations. If a clot is visible within the cervical os, it may be removed with tissue forceps, allowing the cervix to close.

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- When antibiotics are clinically indicated, a combination of ampicillin and metronidazole is appropriate. Use doxycycline if chlamydia is suspected.

- If retained products of conception suspected curettage may be required. Surgical measures should be undertaken if there is excessive or continuing bleeding⁽¹⁰⁾.

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