Clinical Practice Guideline	Antepartum Haemorrhage (APH)
Peninsula Care Goal	Safe

Target Audience

- Registered Midwife
- Obstetric Team – Consultant, Registrar, Medical Officer
- Student Midwife/Medical Student under supervision
- GP Shared Maternity Care Affiliate

Purpose

Antepartum Haemorrhage (APH) is defined as any bleeding from the genital tract after 20 weeks gestation, and before the onset of labour. It complicates between 2-5% of all pregnancies, and is a major cause of perinatal mortality, with the primary causes as a result of Placenta Praevia and Placental Abruption. APH is associated with increased risks of fetal growth restriction, preterm labour, and adverse perinatal outcomes.

Prevention and treatment of anaemia in all pregnant women helps to minimise maternal morbidity associated with APH.

This guideline provides clinicians with advice on management of women presenting with APH.

APH with significant bleeding with haemodynamic instability is an obstetric emergency- SUMMON HELP IMMEDIATELY

Guideline

This guideline is primarily based on the Safer Care Victoria Maternity eHandbook, Antepartum Haemorrhage – Assessment and Management. Placenta Praevia and Placental Abruption can result in massive obstetric haemorrhage without prior warning, and the full extent of the blood loss may not be evident in the event of a concealed abruption. Pregnant women can remain haemodynamically stable until they have lost between a third and half of their circulation blood volume.

Causes

Consider the following causes:

Placental site	Genital tract	Cord insertion
Placenta praevia	Show	Vasa praevia
Placental abruption	Cervix – cervicitis, polyp, ectropion, carcinoma	
Marginal – sinus rupture	Trauma	
	Vulvovaginal varicosities	
	Genital tract tumours	
	Genital infections	
	Haematuria	

Risks associated with APH:

Fetal growth restriction
Preterm labour

Oligohydramnios
Preterm pre-labour rupture of membranes (PPROM)
Increased rates of caesarean section
Postpartum haemorrhage

ACUTE APH MANAGEMENT

Initial assessment and management

Management is dependent on the volume of blood loss, and the degree of maternal and fetal compromise. Medical staff should be notified to assess the woman immediately if there is any indication of compromise to mother or fetus during admission. This allows prompt assessment before potential deterioration of maternal or fetal condition.

Initial assessment and immediate management should include:

- History
- Identification of placental location from available ultrasound results

Maternal assessment

- Vital signs/pain assessment- As per Maternity Observation Chart (MOC) and monitoring plan.
- Estimated blood loss (by weighing where possible)
- Abdominal Palpation (gentle)
- Gentle speculum
    - blood loss
    - cervical dilatation and length
    - membranes
    - presenting part.
- Consider causes

Fetal assessment

- Cardiotocograph (CTG) is indicated from 26 weeks
- CTG should be continued if there is:
    - ongoing bleeding
    - abdominal pain
    - uterine activity.
- Ultrasound – **Do not send a woman with acute APH to radiology until she is stable and maternal or fetal compromise has been excluded.**
- Investigate for:
    - placental position and condition
    - fetal growth and wellbeing
    - cervical length.

Investigations

- Request:
    - full blood count (FBC)
    - group and hold, for minor APH (<50 ml)
    - group and cross match, for APH >50 ml and/or clinical shock

- Kleihauer, if:
  - Rhesus negative
  - abdominal trauma
  - abnormal CTG
- For blood loss >50 ml:
  - liver function tests
  - renal function tests
  - coagulation studies, including fibrinogen

If clear evidence of maternal or fetal compromise

Resuscitation

- **Summon help - consider MET Call, Code Blue**
- **Resuscitate and assess simultaneously**
- IV access x 2 16 g
- Fluid replacement
- Oxygen 8 L/min
- In-dwelling catheter (IDC).

If immediate delivery is indicated

- **Consider Code Pink caesarean delivery for uncontrolled bleeding from placenta praevia, abruption, or bleeding vasa praevia.**
- Consult with senior obstetric and paediatric clinicians
- Prepare resuscitation equipment appropriate for gestation:
  - consider a rapid infusion of 20 ml/kg of Rh O-negative uncross-matched blood, for infants symptomatic of hypovolaemia secondary to blood loss
- Notify SCN/NICU
- Contact PIPER for neonatal assistance +/- transfer if <32/40 weeks' gestation.
- Counsel the woman and family about what to expect in terms of baby's condition and care.
- Avoid tocolysis or delay for steroids

Ongoing management when stable

The management plan is individualized according to gestation, diagnosis and the woman's condition. Following single or recurrent episodes of APH from a cervical ectropion, subsequent care need not be altered.

Corticosteroids

- Administration of corticosteroids should not delay delivery
- If ≤ 36 weeks:
  - Betamethasone 11.4 mg IM
    then
  - Betamethasone 11.4 mg IM in 24 hours
  - Consider second dose at 12 hours if birth likely within 24 hours
  - If risk of preterm birth remains ongoing in seven days, repeat dose
- Between 36^{+1} and 39 weeks, consider corticosteroids if the woman is having a pre-labour CS.

Tocolysis

- Contraindicated if woman is actively bleeding.

Magnesium sulfate ($MgSO_4$)

- Contraindicated if woman is actively bleeding
- Indicated at <30 weeks for neuroprotection, if delivery is imminent
- Regimen:
  - loading dose $MgSO_4$ 4 g IV bolus over 20 minutes
  - maintenance dose $MgSO_4$ 1 g/hr IV for 24 hours or until birth

Under 24 weeks

- Paediatric consultation if birth is being considered from 23/40 weeks' gestation
- If stable and parents willing to consider resuscitation of the neonate. The women may require transfer to a tertiary center after discussion with PIPER, pending maternal fetal clinical status. Each case to be individualised.

Expectant management

- Expectant management may be considered on a case by case basis in recurrent APH (not Vasa Praevia).
- Increased risk of adverse perinatal outcomes including fetal growth restriction.
- Serial ultrasound for fetal growth should be performed.
- Consider as high-risk. An epidemiological study of women with unexplained APH demonstrated an increased risk of oligohydramnios (OR 6.2), premature rupture of membranes (OR 3.4), fetal growth restriction (OR 5.6), preterm labour and caesarean delivery (OR 4.0).
- Anti D if Rh negative
- If stable and under 32/40 may require transfer to tertiary centre after discussion with PIPER

For Inpatient management

- Observations
  - Frequency of observation depends on:
    - maternal condition
    - ongoing bleeding
    - other clinical findings
  - Fetal monitoring daily and as clinically indicated
  - Review by the paediatric/neonatal and anaesthetic teams
  - Ultrasound (US) as clinically indicated.
- Anti D if indicated
- Increased risk of VTE – TED stockings
- Encourage mobility
- Ensure adequate hydration
- Clexane can be hazardous if at risk of further APH. Decision to be made by consultant team if the woman is at high risk of VTE.
- Weekly FBE
- Treat anaemia (see Peninsula Health Anaemia in Pregnancy CPG)
- Active group and hold if at risk of further bleeding
- IV canula if actively bleeding (see Peninsula Health IV cannulation CPG)
- Recurrent APH may require admission until birth.

Outpatient Management

- Discharge to be discussed with the consultant obstetrician on a case by case basis
- Decision based on amount and frequency of bleeding, mother's access to assistance (distance from hospital, support available)
- Consider:
    - Immediately if PV spotting or post-coital bleed with no further bleeding or risk factors
    - After 24 hrs since last fresh blood loss for minor APH
    - Discharge after recurrent APH or with placenta praevia on a case by case basis.
- Manage as high risk pregnancy with serial scans (minimum 4 weekly if normal growth) and obstetric follow up.
- Home-based care requires:
    - the woman's consent
    - the woman to be aware of signs and symptoms which mean she should attend hospital
    - a plan and method to attend hospital if needed.

Planning the Birth

- Planning for birth should be tailored to the individual patient, based on:
    - gestation
    - ultrasound findings
    - history of bleeding
    - medical comorbidities
    - surgeon availability
    - patient preferences
- Optimum timing of birth after unexplained APH without maternal or fetal compromise has not been determined. No evidence to support delivery prior to 37/40.
- Case by case decision to be discussed with consultant
- Consider delivery after 37/40 in women with recent or ongoing APH
- Patient counselling and consent form should include:
    - increased risk of post-partum haemorrhage (PPH)
    - risks associated with caesarean section
    - specific risks of placenta praevia in terms of massive obstetric haemorrhage
    - potential need for blood transfusion
    - risk of hysterectomy.
- A woman with a placental edge less than 2 cm from the internal os in the third trimester is likely to need delivery by caesarean section (after 34 weeks).
- Elective delivery by caesarean section in asymptomatic women is not recommended before 38 weeks of gestation.
- Placenta praevia with a previous caesarean section carries a risk of massive obstetric haemorrhage and hysterectomy and should be carried out in a unit with a blood bank and facilities for high dependency care.
- Placenta accreta - maternal and neonatal outcome is optimised in stable patients with a planned delivery at 34–36 weeks gestation. The gestation for elective delivery should balance the neonatal risks of prematurity against the maternal risks of emergent delivery.
- At <30 weeks gestation, consider magnesium sulphate for neuroprotection (see – Safer Care Victoria Maternity eHandbook: Preterm birth).

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Intrapartum fetal monitoring

- Women in labour with active vaginal bleeding require continuous electronic fetal monitoring.
- In women who are in preterm labour whose pregnancies have been complicated by major APH or recurrent minor APH, or if there has been any clinical suspicion of an abruption, then continuous electronic fetal monitoring should be recommended.
- In women who have experienced one episode of minor APH, in which there have been no subsequent concerns regarding maternal or fetal wellbeing, intermittent auscultation is appropriate.
- Women with minor APH with evidence of placental insufficiency (such as fetal growth restriction or oligohydramnios) should be recommended to undergo continuous electronic fetal monitoring.

Management of the third stage of labour in women with APH

- Postpartum haemorrhage (PPH) should be anticipated in women who have experienced APH.
- Active management of the third stage is recommended with syntometrine.
- The PPH trolley should be available.
- Consider Tranexamic acid at or just prior to the birth.

Postnatal management

- The postnatal management of pregnancies complicated by major or massive APH should include thromboprophylaxis, debriefing and clinical incident reporting. [5]

Information for GP Shared Care Providers

- Antepartum haemorrhage is considered an emergency and must always be referred to the birth suite for an acute assessment (9784 7959)
- All women should have an initial hospital assessment of antepartum bleeding. Women who have experienced a significant APH (more than spotting or post-coital bleeding) are considered high risk and require obstetric care and follow up with serial ultrasound.
- Helpful information to accompany women who are being referred but who have not yet booked includes the Blood Group and the Mid-Trimester (19-20wks) ultrasound report. Any relevant history such as trauma, previous APH or risk factors such as hypertension or growth restriction is also helpful.

Key Aligned Documents

- Management of Placenta Praevia, Placenta Accreta and Vasa Praevia
- Abdominal Examination/Palpation
- Anaphylaxis Immediate and Refractory Management (Paediatric & Adult)
  Fetal Surveillance
- Induction of Labour
- Intrauterine Resuscitation
- Normal Labour and birth
- Assisted Deliveries
- Postpartum Haemorrhage
- Premature Labour
- Vaginal Birth after Caesarean Section (VBAC)
- Blood and Body Substance Exposure Prevention and Management of Exposure

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Evaluation
Regular document revision and review of relevant VHIMS/RiskMan Reports

References
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[5] National Blood Authority (2015) Patient Blood Management Guidelines: Module 5 – Obstetrics and Maternity. Retrieved from https://www.blood.gov.au/system/files/documents/20180426-Module5-WEB.pdf
[6] Royal College of Obstetricians and Gynaecologists (RCOG) 2015. Blood Transfusion in Obstetrics. Green-top Guideline No. 47. Retrieved from https://www.rcog.org.uk/globalassets/documents/guidelines/gtg-47.pdf

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