Antepartum Haemorrhage (APH)

Document Type	Guideline
Function	Clinical Service Delivery
Healthcare Service Group (HSG)	National Women's Health
Department(s) affected	Maternity
Patients affected (if applicable)	Maternity patients with potential for (or actual) APH
Staff members affected	All maternity practitioners working in or having access to National Women's Health services.
Key words (not part of title)	PV bleed, placenta, praevia, abruption
Author – role only	Clinical Director. Obstetrics
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1. Purpose of guideline

This guideline is to ensure the wellbeing and safety of the patient and her unborn baby within Auckland District Health Board (ADHB). It aims to prevent complications and reduce morbidity and mortality associated with antepartum haemorrhage (APH).

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2. Guideline management principles and goals

All patients with APH are to be referred to the Women's Assessment Unit (WAU), via the WAU registrar on call or by their private obstetrician.

An assessment may occur on either WAU or the Labour and Birthing Suite, depending on gestation and severity of the APH.

The consultant on call for WAU is to be informed of the patient's admission for all referrals to the team. The WAU consultant may liaise with the L&B consultant as needed.

If the lead maternity carer (LMC) is a private obstetrician, they should inform the WAU registrar and consultant of any major APH that may require delivery and/or HDU care.

Initial assessment can be by midwifery staff members and timely attendance by medical staff members must occur. Private obstetrician LMCs are responsible to assess in WAU.

ADHB staff members have a duty of care to any unstable patient regardless of LMC.

All antenatal inpatients must be under National Women's Health (NWH) team. If there is a private obstetrician involved and delivery is deemed urgent then clinical discretion is advised as to team involvement. There should be a discussion of clinical responsibility in this situation.

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3. Definition and aetiology

APH can be defined as any vaginal haemorrhage after 20 weeks gestation.

The most common causes are: incidental and undetermined causes (edge bleeding, circumvallate formation), placenta praevia, placental abruption, vasa praevia and local causes. The prevalence of APH of undetermined origin is common after 37 weeks.

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4. Assessment

The following steps should be followed to ensure the safety of a patient and her baby when APH occurs:

- All patients with APH need to be assessed with a view to admission
- In cases of severe APH occurring in the community, the patient should be advised to transfer to hospital in an ambulance to enable rapid resuscitation and transport. For this purpose, “severe APH” is defined as >500ml estimated blood loss and/or signs of shock. An IV infusion must be set up with a large bore cannula and the patient admitted via the Emergency Department (ED) to the Labour and Birthing Suite or the Operating Room. Triage should occur in ED and if status 1 or 2 (unstable) the patient should be kept in the resuscitation area of ED and seen by the obstetric team there prior to transfer to level 9. The paediatrician on call and operating room staff members, including the anaesthetist, need to be aware of the patient’s pending arrival. The blood bank should be informed early if there is a need for blood products including emergency blood or the Massive Transfusion Protocol
- In less severe cases the patient can be assessed in WAU. In general, this means estimated blood loss (included concealed loss) of less than 500ml and not ongoing
- Minor degrees of APH (e.g. spotting), once assessed, may be managed in the outpatient setting, with close follow up arranged (see follow up below)

Initial measures

- Assess mother and fetus
- BP, pulse, pallor
- Pain
- Extent of bleeding
- Fetal heart rate presence or absence
- Intra-venous (IV) infusion
- Bloods for FBC (full blood count), group and antibody screen and Kleihauer. If clinically a placental abruption or massive haemorrhage, request an urgent coagulation screen
- Order appropriate blood (group O negative, group specific or cross matched blood) and/or blood products for transfusion as necessary

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5. Diagnosis

i. History

- Ask about events leading up to the onset of bleeding
- Try to estimate blood loss

ii. Clinical records: (it is important that all records are available from both ADHB and the private LMC)

- Previous ultra-sound scans – dating, any evidence of placenta praevia?

iii. Risk factors for placental abruption

- Hypertension/pre-eclampsia
- Smoker
- Previous abruption
- IUGR (intra uterine growth restriction)
- Domestic violence
- Accurate gestation
- Blood group, including evidence of antibodies. If positive antibody screen, request urgent manual cross match

iv. General examination, besides the initial assessment

- Abdominal examination, assess
  - CTG
  - Uterine tone and tenderness
  - Uterine activity
  - Fundal height
  - Nature of presenting part
  - Relation of presenting part to pelvic brim (NB: If the presenting part is well engaged, then placenta praevia is unlikely, exclude active labour)

v. If there has been no recent ultra sound scan, do a portable scan to assess placental position. Request departmental scan, urgency should depend on the clinical situation. An unstable patient should not transfer to the ultrasound department;

vi. Gentle speculum examination

- Exclude vaginal or cervical bleeding
- Note whether membranes ruptured or not

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6. Management of APH in general

There are few high quality clinical trials to guide the management of antepartum haemorrhage or abruption, where there is high quality evidence this is noted below.

If there are signs of fetal or maternal compromise, consider immediate delivery.

Once placenta praevia has been excluded it is safe to do a vaginal examination. A patient in advanced labour with imminent delivery expected may be delivered vaginally, otherwise urgent caesarean section once the mother has been stabilised.

Transfusion should be used as appropriate to stabilise the patient, especially in the case of placenta praevia at early gestation where it may be of benefit to prolong gestation.

Anti-D gamma globulin must be administered to all Rhesus negative patients. Kleihauer results must be used to calculate the dose of anti-D required (level 1 evidence).

If bleeding settles and patient stable:

- ≥37/40 – usually safer to deliver baby
- placenta praevia, delivery by caesarean section
- small abruption and patient stable and reassuring CTG or bleeding of indeterminate cause, induction of labour is appropriate
- If undetermined origin, recommend IOL at 38+ weeks
- ≤37/40 – admit to antenatal ward (96 or 98)
- Daily CTG
- steroids may be considered if prelabour CS is planned prior to 38 weeks
- ‹34+6/40 – give steroids for fetal lung maturity if any uterine activity or other concern regarding risk of preterm birth. Daily CTG. Treat localised vaginal or cervical bleeding appropriately and either admit or discharge patient depending on diagnosis and extent of bleeding

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7. Follow up

The patient should be counselled regarding the risks of preterm labour and growth restriction after APH. Ensure a customised growth chart has been generated and serial growth scans arranged. This is important because of the increased risk of SGA and perinatal mortality associated with APH.

Active management of the third stage is recommended (level A recommendation by RCOG).

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8. Placenta praevia

Inpatient management is recommended for patients with major placenta praevia for bleeding in the third trimester. After a first bleed, the patient may be discharged at the discretion of the consultant in charge of her care, however if there is recurrent bleeding in the third trimester then admission is usually advised for the remainder of the pregnancy and a date for caesarean arranged. Consideration should be given to transport arrangements and communication with the LMC, particularly if the patient is from another DHB.

A trial of home versus hospital care for 53 patients with symptomatic stabilised placenta praevia between 24 and 36 weeks showed no clear clinical advantage or disadvantage to either. However the one patient who required immediate transfusion and delivery was in the home care group. This should be balanced against reduced length of stay and cost.

Tocolysis for treatment of uterine activity in the presence of bleeding due to placenta praevia may rarely be given in order to complete steroids, provided CTG is normal and delivery not indicated for maternal or fetal reasons. Caution is advised for any tocolysis in the presence of APH, since abruption is more common with a placenta praevia.

The mode of delivery should be based on clinical judgement in each situation, but a placenta encroaching within 2cm of the internal os is a contraindication to attempting vaginal delivery.

Elective CS should be planned for 38 weeks for an uncomplicated placenta praevia.

Operating room management of placenta praevia

Prior to delivery all patients with placenta praevia, and their partners, should have had antenatal discussions about delivery, possible blood transfusion requirements, anaesthetic and surgical measures and contingencies. The patient's wishes for future fertility should be clearly documented and possibility of hysterectomy discussed.

On the basis of the above discussions, a clear surgical and anaesthetic plan should be made and documented.

Current blood group and screen should be continuously available for the peripartum period.

In any case where a patient with placenta praevia is being delivered in the ADHB facility, the consultant on call for labour and birthing should be informed.

An experienced obstetrician and anaesthetist should attend any patient going to the operating room with known placenta praevia. The consultant responsible needs to be in the operating room for the delivery. Consideration should also be given to having a second obstetrician available to assist. Patients with higher risks of complications, namely previous uterine scars, anterior placenta praevia or associated placenta

accreta, need to be delivered by an experienced specialist not a trainee, and the assistant should also be experienced.

Intra-operative cell salvage should be arranged for all placenta praevia cases in the ADHB facility.

The surgical manoeuvres required in the face of massive haemorrhage associated with placenta praevia caesarean sections should be performed by appropriately experienced surgeons and calling for extra help early should be encouraged and not seen as "losing face".

The choice of anaesthetic technique for caesarean sections for placenta praevia must be made by the anaesthetist conducting the procedure, after full prior discussion of the surgical plan with the primary surgeon.

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9. Placenta accreta/increta/percreta

All patients booked for the operating room at ADHB with a known or suspected placenta accreta/increta/percreta should have the Placenta Accreta/Percreta checklist completed in advance. This should form part of the Surgical Safety checklist.

Patients who have had a caesarean section in a previous pregnancy and who have an anterior placenta praevia subsequently should be considered at high risk of having a morbidly adherent placenta. In such cases particular attention should be focused on confirming this diagnosis using ultrasound imaging and MRI if necessary. It should be noted that the sensitivity of imaging (whether ultrasound or MRI) is about 70%, hence the diagnosis cannot be fully excluded with imaging. When suspected, senior anaesthetic and obstetric input are vital when planning the delivery. Other specialties should be consulted well in advance as appropriate, e.g. Gynaecological Oncology, Urology, Interventional Radiology and Vascular Surgery. A case conference should occur pre-operatively. There should be a low threshold for caesarean hysterectomy. These patients are under general O&G teams with a nominated experienced surgeon as the consultant in charge of the case.

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10. Placental abruption with viable fetus

- FBC and Urgent Group and Screen
- Intravenous access
- CTG

If clinically an abruption i.e., tender tense uterus, vaginal bleeding (can be very little) do not wait for the CTG to deteriorate, deliver as soon as possible. Do a vaginal examination, vaginal delivery may be as quick as caesarean if patient is in advanced labour. If the cervix is favourable consider ARM and syntocinon with a low threshold for CS. Hypovolaemia and coagulopathy must be corrected early.

If there is any maternal or fetal compromise, this is an obstetric emergency and delivery must be immediate.

For smaller abruptions, a more conservative approach may be indicated. Remember clinical signs, pain, distress, pulse and CTG changes are a far more accurate indicator of abruption than vaginal bleeding.

For < 30 weeks with abruption discuss with MFM.

Notify the anaesthetic registrar on duty to discuss pain relief requirements and possibility of delivery.

Notify the neonatal service regarding possible delivery.

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11. Placental abruption with fetal demise

These patients have usually had a massive intrauterine bleed, which may not be apparent vaginally. These patients are at high risk of becoming hypovolaemic and of developing DIC and later sepsis. Delivery is required as soon as possible, to reverse the pathology. Maternal condition is now the priority:

- Admit to HDU (High Dependency Unit)
- Urgent: coagulation screen; FBC; U&E; and blood available for transfusion as clinically indicated
- Correct hypovolaemia and coagulation defects. Be cautious of a “normal” BP in this context, it does not exclude pre-eclampsia/HELLP
- Monitor urinary output
- Artificial rupture of membranes and a traumatic vaginal delivery. Vaginal birth is the recommended mode of delivery for most patients. Syntocinon may be used at the discretion of the specialist on duty in the Labour and Birthing Suite with careful monitoring of contractions. Syntocinon must be used with extreme caution in the hypovolaemic patient
- Notify the anaesthetist on duty

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12. Supporting evidence

- Beischer, N.A., Mackay E.V., Colditz, P.B. (1997) Obstetrics and the Newborn, Third edition, chap 21, pages 195-206, Saunders
- Interventions for treating placental abruption: Cochrane review updated 16 Dec 2011
- Interventions for suspected placenta praevia: Cochrane review updated 31 Dec 2002, published 20 Jan 2010
- RCOG Green top Guideline No 63 Antepartum Haemorrhage, November 2011

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13. Associated ADHB documents

- Access Holders in Women's Health
- Caesarean Section (CS) - Pre, Peri & Post-Op Care
- Fetal Heart Rate - Intrapartum - Surveillance
- Group & Screen Requirements in Maternity
- Hypertension - Antenatal, Intrapartum & Postpartum Management
- Induction of Labour - RBP
- Informed Consent
- Intra-Operative Cell Salvage (IOCS) - Obstetrics
- Postpartum Haemorrhage
- Registrars Guidelines for Support in O&G
- Stillbirth - Investigation Protocol

- RMO Handbook
- Placenta Praevia and Suspected Accreta/Percreta Checklist

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14. Disclaimer

No guideline can cover all variations required for specific circumstances. It is the responsibility of the health care practitioners using this ADHB guideline to adapt it for safe use within their own institution, recognise the need for specialist help, and call for it without delay, when an individual patient falls outside of the boundaries of this guideline.

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15. Corrections and amendments

The next scheduled review of this document is as per the document classification table (page 1). However, if the reader notices any errors or believes that the document should be reviewed ***before*** the scheduled date, they should contact the owner or the Clinical Policy Advisor without delay.

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