Worcestershire Acute Hospitals NHS Trust

Pathway for the management of Antepartum Haemorrhage

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Key Amendment

Date	Amendment	Approved by
March 2020	New Guideline	

This guideline is to be used in conjunction with the following guidelines; 'management of placenta praevia' and 'management of major obstetric haemorrhage'

Definitions

Antepartum haemorrhage (APH) is bleeding from the genital tract after 24 weeks of gestation up to and including delivery of the fetus. Volume lost is often difficult to quantify, therefore it is paramount to be guided by clinical signs and that fetal compromise or demise serves as an important indicator of volume loss.

- *Spotting – streaking/staining or blood spotting on underwear or pad*
- *Minor haemorrhage - <50ml that has settled*
- *Major haemorrhage – 50-1000ml w/o signs of shock*
- *Massive haemorrhage - >1000ml or any volume with evidence of shock*

Causes

- Placenta praevia
- Placental abruption
- Unclassified APH
- Vasa praevia
- Local causes e.g. bleeding from cervix / vagina
- Bleeding from previous caesarean scar/ uterine rupture
- Trauma (consider domestic violence as a cause)

Risk Factors

APH has heterogeneous pathology and cannot be predicted, however modifiable risk-factors include;

- Smoking (encourage cessation)
- Cocaine and amphetamine misuse (encourage cessation)
- Use of artificial reproductive techniques

Clinicians should note that APH (regardless of the cause) is associated with increased perinatal morbidity and mortality and as such those presenting with APH should be considered a high-risk pregnancy and transferred to consultant-led care

Management

- History - including any risk factors and smear history
- Maternal observations
- Abdominal palpation
- Speculum examination
- Digital examination – only perform if certain there is no placenta praevia
- Consider – USS for placental localisation (if not known or evidence to suggest it may be low lying)
- Consider Kleihauer if RhD –ve
- Assess fetal wellbeing – CTG/USS

Women presenting with spotting, who are no longer bleeding and where placenta praevia has been excluded may go home, following a reassuring initial clinical assessment, in the absence of additional risk factors.

All women with an initial APH, heavier than spotting or with ongoing bleeding should remain in hospital until the bleeding has stopped (usually 24hours after the bleeding has stopped).

Paired steroids, for fetal lung maturation should be considered from 24+0-34+6 if preterm delivery is likely. For women presenting with spotting, where lower genital tract bleeding is the likely source and imminent delivery is unlikely, steroids are unlikely to be of benefit, but should still be considered.

Tocolysis should only be used to allow for steroid administration if the woman is stable and there is no fetal compromise. This decision should be made by the senior decision maker.

Following a single episode of spotting from a cervical ectropion antenatal care need not be altered, however following an APH from any other source, the pregnancy should be reclassified as ‘high risk’, the women booked under consultant led care with serial growth scans performed.

RhD –ve women should be given anti D Ig following an APH regardless of whether prophylaxis has been given or not. In those with recurrent APH, anti D Ig should be given every 6 weeks as a minimum.

Timing of Delivery

Women with an APH and evidence of maternal/fetal compromise require immediate delivery.

Optimum timing of delivery for women presenting with an unexplained APH without evidence of maternal/fetal compromise is not known. Therefore, timing of delivery in such cases should be individualised and made by a senior obstetrician.

Fetal monitoring in labour

Women with a history of APH require continuous, external fetal monitoring in labour. For those with a single minor APH/episode of spotting and no subsequent concerns or risk factors, intermittent auscultation is appropriate

Placenta Praevia and antepartum haemorrhage (APH)

- Management will depend upon gestation, amount of bleeding, site/ type of placenta and haemodynamic status of the woman.
- **Vaginal examination should be avoided in all known cases of placenta praevia and in cases where placenta praevia has not been excluded.**
- Massive haemorrhage should be dealt with in accordance with the protocol for massive obstetric haemorrhage.
- Tocolysis for women presenting with symptomatic placenta praevia or a low-lying placenta may be considered for 48 hours to facilitate administration of antenatal corticosteroids.

If delivery is indicated based on maternal or fetal concerns, tocolysis should not be used in an attempt to prolong gestation.

- Women with minor placenta praevia who present with APH should be admitted and monitored. If bleeding settles and there are no further episodes of bleeding PV over 48 hours they may be managed as an outpatient with careful counselling. It should be made clear to any woman being managed at home that she should attend hospital immediately if she experiences any bleeding, any contractions or any pain.
- Women less than 34 weeks with major praevia who have previously bled should initially be managed as an inpatient for at least 48 hours after the bleeding settles.

They may then be managed as an outpatient after careful counselling and review by a consultant.

- Women from 34 weeks of gestation with major placenta praevia who have previously bled should be reviewed and counselled on an individual basis. There should be a low threshold for offering admission from 34/40 .
- Decisions regarding blood availability during inpatient antenatal care should be based on clinical factors relating to individual cases, as well as local blood bank services. Women with atypical antibodies form a particular high-risk group and discussions in these cases should involve the local haematologist and blood bank.
- Where hospital admission has been decided, an assessment of risk factors for venous thromboembolism in pregnancy should be performed as outlined in the Royal College

Obstetricians and Gynaecologists Green-top Guideline No. 37a. This will need to balance the risk of developing a venous thromboembolism against the risk of bleeding from a placenta praevia or low lying placenta.

- Mode of Delivery for pateints with APH caused by placenta praevia should be by caesarean section.

The timing of delivery

- Late preterm (34+0 to 36+6 weeks of gestation) delivery should be considered for women presenting with placenta praevia or a low-lying placenta and a history of vaginal bleeding or other associated risk factors for preterm delivery.
- Delivery timing should be tailored according to antenatal symptoms and, for women presenting with uncomplicated placenta praevia, delivery should be considered between 36+0 and 37+0 weeks of gestation.
- Emergency caesarean section will be influenced by individual circumstances.

Placenta Abruption

Definition

Partial or complete premature separation of a normally situated placenta before the delivery of the baby.

Risk factors

- previous abruption
- pre-eclampsia
- IUGR
- Malpresentation
- Polyhydramnios
- advanced maternal age
- Multiparity
- low BMI
- IVF
- Intrauterine infection
- PROM
- Trauma
- Smoking and drug use (cocaine and amphetamines)
- Maternal thrombophilias

- The bleeding may be concealed, revealed or both.
- Patient's hemodynamic status does not always correspond to apparent blood loss. Beware of large concealed abruption where revealed APH may be minimal.
- All women presenting with APH should have their pulse and blood pressure checked.

- Pre-eclampsia and abruption commonly co-exist.
- There is tendency to under transfuse in cases of massive APH, and CVP should be considered.
- Sudden onset of severe abdominal pain, shock, and tenderness over a hard 'woody' feeling uterus are the characteristic signs and symptoms.
- Where there an abruption in a posteriorly sited placenta the uterus may be soft.
- The fetal heart sounds may be muffled or absent. If unsure perform ultrasound scan to confirm fetal heart either present or absent.
- Fetomaternal haemorrhage during abruption can be significant. Kleihauer test should be performed on all RhD negative women with abruption and appropriate dose of anti-D should be given. Anti D Guideline

Placental Abruption & Intrauterine Fetal Death

- If the baby is dead the abruption is major by definition and a coagulopathy is possible. There is likely to have been up to 1500ml of haemorrhage (always implement the massive obstetric haemorrhage protocol). Consider early and appropriate blood transfusion. Remember that haemoglobin estimation on admission may be falsely elevated.
- On-call consultant obstetrician and anaesthetist should be informed
- ARM should be performed if cervix is favourable as this will reduce intra-uterine pressure.
- If maternal condition is stable and cervix is not favourable induction of labour should be considered using Propess 10mg vaginally (see guideline Induction of labour)
- Urine output should be monitored hourly.
- Labour usually progresses quickly to vaginal delivery in this situation.
- If labour progress is inadequate labour should be augmented with oxytocin
- Try and avoid a caesarean section in cases of intrauterine fetal death, however if delivery is delayed the risk of CS must be balanced against the risk of coagulopathy.

Mild revealed abruption & live fetus and no uterine tenderness

- Expectant management may be followed.
- Timing and mode of delivery depends upon amount of bleeding, maternal status and presence or absence of fetal heart and gestation.

Major Placental Abruption & Live Fetus

- In all cases of significant revealed APH / concealed abruption management depends on maternal condition and should be dealt with in accordance with the protocol for major APH.

- In suspected cases of placental abruption where the fetus is alive the decision regarding delivery will be determined by several factors e.g. CTG, maternal condition, degree of bleeding (if revealed haemorrhage) and gestation.

- Delivery decisions should be made by an experienced obstetrician.

- If caesarean section is to be performed for major abruption Consultant Obstetrician and Consultant Anaesthetist should ideally be present and haematology must be involved. There

may be cases of major abruption where urgent caesarean section may be required and senior most obstetrician available should proceed with the delivery while awaiting arrival of on-call consultant.

Unclassified APH

- In almost 50% of cases cause of APH cannot be established. Some of these are minor degrees of placenta praevia and placental abruption and others may be disruption of sinuses or small vessels (marginal bleed)
- Unexplained APH is known to be associated with increased maternal and perinatal morbidity and mortality, there is also an associated with DV.
- Usually associated with mild APH and in some cases recurrent episodes of minimal bleeding PV.
- These cases may be managed as an outpatient after initial assessment for 24 hours.
- Fetal growth should be monitored by serial growth scans as there is a higher risk of IUGR and perinatal loss.
- In cases of recurrent unclassified APH optimum timing of delivery is not clear, therefore each decision should be individualised and consultant led. Induction of labour should be considered at or near term even if fetal growth is satisfactory.
- Kleihauer test should be performed on all RhD negative women with abruption and appropriate dose of anti-D should be given. Anti D Guideline

Local Causes

- Bleeding can occasionally occur from the cervix either due to cervical ectopy, polyps or cervical carcinoma (please check smear history).
- The bleeding however is not usually massive, but may be present as multiple, small APH's
- Bleeding from the vagina is usually secondary to infection or trauma. Candidiasis is a common, treatable cause.
- Vulval bleeding can result from the rupture of vulval varicosities. Immediate treatment is by applying pressure to the vulva and resuscitation. Surgery may well be necessary to stop the bleeding.
- Bleeding may occur from perineal laceration caused by descending fetal parts during active second stage. If there is significant bleeding while awaiting delivery of the baby it should be expedited e.g. by giving episiotomy or instrumental delivery as maternal shock can occur from significant APH whatever the cause.

Management of Major APH

1. Prompt recognition
    - Consultant obstetrician / anaesthetist
    - Registrar obstetrician / anaesthetist
    - Midwives and delivery suite coordinator
    - Porters should be informed to be on standby for urgent blood collection from the lab
    - Haematologist and blood transfusion technicians
    - HCAs
    - Scribe

2. Activate **2222** call and say 'Major Obstetric Haemorrhage' and give location Switchboard will contact the lab, the anaesthetist on call, the porters and consultant haematologist. The major haemorrhage pack will be initiated (appendix 1).

Follow ABCD rule

A - Airway

- Assess and maintain patency.
- O2 via face mask (Hudson).
- Attach pulse oximeter to patient.

B - Breathing

- Assess
- Protect airway
- Monitor respiratory rate

C - Circulation

- Restoration of circulating volume should be the first priority - insert 2 large bore IV cannulae.
- Send bloods for FBC, clotting studies, PET bloods and X–match 4 units blood. If the baby is dead the abruption is major by definition and a coagulopathy is possible. There is likely to have been up to 1500ml of haemorrhage. It is important to give up to 2 units of blood as soon as possible. Do not be fooled by haemoglobin estimation on admission as it may well be falsely elevated.
- Clinical vigilance & ongoing assessment of patient. Continuous pulse/BP/ECG/Oximeter monitoring
  - Regularly assess volume loss
  - Consider CVP/arterial line.
  - Catheterise and monitor urine output hourly.

Replace volume loss and urgent access to blood

- Warm IV fluids and infuse with a pressure bag. Initially infuse up to 2 litres of Hartmann's solution followed by colloid e.g. Volplex 500mls. Administer blood as soon as it is possible.
- If blood loss appears life threatening consider giving O Rh negative red cells. Preferably however use group specific fully X matched blood.
- When requesting blood be clear in your request to the haematologist and porters about the urgency and state what you need, when you need it and enquire when it will be ready for collection alert

D - **Diagnose** the cause of APH and manage accordingly as above with regards to fetal monitoring and d**elivery**.

Inform paediatricians and request attendance of experienced paediatrician for delivery.

NB: APH predisposes to PPH (see PPH guideline)

After Care

- All women following major APH require intensive monitoring for at least first 24 hours.
- In some cases transfer to high dependency unit or ITU may be required
- Remember accurate documentation at all times.

- Debrief/discuss with patients & colleagues following delivery.
- Datix should be completed for all major APH cases.
- It is important to remember that thrombo-embolic disease (TED) is still one of the commonest causes of maternal death. TED stockings should be the bare minimum in these cases. Consider pneumatic calf compression devices and continue them post-operatively until it is safe to give heparin (e.g. Enoxaparin

References:

Royal College of Obstetricians and Gynaecologists, Green-top Guideline no.63, Antepartum Haemorrhage

Transfusion Management of Massive Haemorrhage