

Antepartum Haemorrhage

Definition:

Antepartum haemorrhage (APH) is defined as bleeding from the genital tract during pregnancy, before birth but after 24 weeks of gestationⁱ. It occurs in about 5% of all pregnanciesⁱⁱ. Although it is responsible for very few maternal deaths in the UK, worldwide it is thought to account for about 50% of the 500,000 annual maternal deathsⁱⁱⁱ.

Causes:

Bleeding can come from any of the anatomical sites involved in pregnancy. Most commonly, bleeding comes from the placenta. More rarely, it can come from the foetus or from the incidental causes relating to the mother's normal anatomical sites. Table 1 summarises the relative prevalence of different causes.

Table one: Causes of APH.

| Cause | Percentage of total APHs |
|------------------------------|--------------------------|
| Placenta praevia | 30% |
| Placental abruption | 35% |
| Local causes (vagina/cervix) | 5% |
| Blood Dyscrasias | <1% |
| Cause never found | 30% |
| Vasa Praevia | <1% |

(After Hamilton-Fairley, 2009^{iv})

Placental abruption (or 'abruptio placentae')

An 'abrupted' placenta is one which is normally situated and has separated from the uterine wall^v. This causes bleeding from the placental bed^{vi}. Bleeding can be directly in to the genital tract ('revealed') or it can be into the uterus with little or no loss into the vagina ('concealed')^{vii}. This means that blood loss may be inconsistent with the patient's state- i.e. they may have severe shock even though only a little blood loss has been observed. Retention of blood and possibly blood clots can cause pain and tenderness, as well as a tense uterus^{viii}. The blood supply to the foetus has been compromised. This means that parts of the foetus may not be felt, or that the foetus may be dead^{ix}.

Placenta Praevia.

This is a condition where the placenta is found lying in the lower segment of the uterus^x. When the lower segment of the uterus starts to stretch, the placenta starts to stretch and bleed^{xi}. The position of the placenta may push the presenting part upwards, encouraging malpresentation of the foetus^{xii}. Blood loss is not usually concealed, so the mother's state should be consistent with observed loss^{xiii}.

Bleeding can be recurrent^{xiv}. Risk factors for praevia include multiple gestation, a previous delivery by caesarean section, a structural uterine abnormality or assisted conception^{xv}. As the bleeding comes from the mother rather than the foetus, the situation is more serious for the mother^{xvi}. Due to the position of the placenta and risk of further bleeding, it is considered good practice not to carry out a vaginal examination on a woman with placenta praevia^{xvii}. This also means that a VE should not be performed in a woman presenting with an APH until placenta praevia has been excluded. Placenta praevia can be seen on ultrasound scanning^{xviii}. It is usually diagnosed early in pregnancy. Women with known placenta praevia will have frequent scans to see if it 'migrates' away from the cervix, which many do. NB: there are different grades of placenta praevia depending on the extent that the placenta covers the internal os. Delivery is usually by planned Caesarean section, using measures such as cell salvage and ensuring blood is cross-matched and available in the theatre in anticipation of haemorrhage.

Foetal

Vasa praevia is a rare condition^{xix} in which the foetal vessels run through the membranes, in front of the presenting part of the foetus (i.e. over the cervical os)^{xx}. This causes problems when the membranes rupture, as the vessels begin to bleed, causing massive foetal haemorrhage .

Maternal/incidental

In a non-pregnant state, various pathological processes can cause bleeding from the genital tract. Such 'local' causes can include those arising from the cervix (e.g. cervicitis, ectropion or carcinoma) or from the vagina (e.g. trauma or infection) .

Maternal blood dyscrasias may also cause APH. These are extremely rare however, and are usually known about before pregnancy^{xxi}.

Other

There are also a number of APHs which are unexplained^{xxii}. There has been speculation that these may be small and unrecognised placental abruptions^{xxiii}.

Differential Diagnosis.

Management of APH is very different depending on the site of bleeding. Consequently it is important to differentiate between different causes of APH. Table two summarises the characteristics of two of the most serious causes, placenta praevia and placental abruption^{xxiv}:

Other maternal causes can be determined in the ways they would be outside of pregnancy. For example, cervical carcinoma by smear test, ectropion by visualising the cervix on examination^{xxv}.

Vasa praevia is often missed. It is usually suspected when the membrane rupture (either spontaneous or artificial) is accompanied by painless and fresh vaginal bleeding, as the foetal vessels have been ruptured too^{xxvi}.

Table two: Differentiating Placental Abruption and Praevia.

| | Abruption | Placenta Praevia |
|------------|--|--|
| Shock | Inconsistent with external blood loss | Consistent with external blood loss |
| Pain | Common, often severe. Constant with exacerbations | No. Contractions occasionally. |
| Bleeding | May be absent. Often dark. | Red and often profuse. Often smaller previous APHs. |
| Tenderness | Usual, often severe. Uterus may be hard. | Rare |
| Foetus | Lie normal, often engaged. May be dead or distressed. | Lie often normal/ head high. Heart rate usually normal. |
| Ultrasound | Often normal, placenta not low | Placenta low |

(After Impey and Child, 2012)^{xxvii}

Management:

Follows same principles as that for any haemorrhage

- 1) Ensure women is assessed in ABC fashion
- 2) Establish venous access and that a FBC and G&S have been taken (as minimum)
- 3) Take history of any precipitating factors e.g. sexual intercourse, abdominal trauma
- 4) Establish obstetric history e.g. where placenta has been located on USS
- 5) Regular observations and CTG monitoring
- 6) Vaginal examination with speculum to directly visualise ectropion/source of bleeding/extent. This will also enable you to take swabs to exclude infection as a cause
- 7) Urgent USS to establish cause of bleed and establish fetal viability
- 8) Majority of women are advised to remain in hospital for period of observation (usually 24 hours) and can be safely discharged if they remain bleed free for 24 hours
- 9) Remember anti-D for women who are rhesus negative – this should be given whenever ‘mixing’ of fetal and mothers blood may have occurred
- 10) In cases of severe APH – a full ‘maternal haemorrhage’ may need to be instigated, involving a category 1 emergency caesarean section in theatres

Emma Chan
Fourth Year
University of Nottingham

References

- i Royal College of Obstetricians and Gynaecologists. Antepartum Haemorrhage. Green-top Guideline No. 63. 1st Ed. November 2011.
- ii Hamilton-Fairley, D.(2009) Lecture Notes: Obstetrics and Gynaecology. 3rd ed. Singapore: Wiley-Blackwell.
- iii Royal College of Obstetricians and Gynaecologists. Antepartum Haemorrhage. Green-top Guideline No. 63. 1st Ed. November 2011.
- iv Hamilton-Fairley, D.(2009) Lecture Notes: Obstetrics and Gynaecology. 3rd ed. Wiley-Blackwell: Singapore.
- v Hanretty, K. P (2010) Obstetrics Illustrated. 7th ed. China: Churchill Livingstone.
- vi Hamilton-Fairley, D.(2009) Lecture Notes: Obstetrics and Gynaecology. 3rd ed. Wiley-Blackwell: Singapore.
- vii Kenny, L. C. (2011). Chapter 8: Antenatal Obstetric Complications. In Baker, P.H and Kenny, L. C (Eds) Obstetrics by Ten Teachers, 19th ed, (pp. 85-108) India: Hodder & Stoughton.
- viii Hanretty, K. P (2010) Obstetrics Illustrated. 7th ed. China: Churchill Livingstone.
- ix Hamilton-Fairley, D.(2009) Lecture Notes: Obstetrics and Gynaecology. 3rd ed. Singapore: Wiley-Blackwell.
- x Hamilton-Fairley, D.(2009) Lecture Notes: Obstetrics and Gynaecology. 3rd ed. Wiley-Blackwell: Singapore.
- xi Hanretty, K. P (2010) Obstetrics Illustrated. 7th ed. China: Churchill Livingstone.
- xii Symonds, E. M and Symonds, I. M. (2004). Essential Obstetrics and Gynaecology. 4th ed. Churchill Livingstone: Spain.
- xiii Hanretty, K. P (2010) Obstetrics Illustrated. 7th ed. Churchill Livingstone: China.
- xiv Symonds, E. M and Symonds, I. M. (2004). Essential Obstetrics and Gynaecology. 4th ed. Churchill Livingstone: Spain.
- xv Kenny, L. C. (2011). Chapter 8: Antenatal Obstetric Complications. In Baker, P.H and Kenny, L. C (Eds) Obstetrics by Ten Teachers, 19th ed, (pp. 85-108) India: Hodder & Stoughton.
- xvi Kenny, L. C. (2011). Chapter 8: Antenatal Obstetric Complications. In Baker, P.H and Kenny, L. C (Eds) Obstetrics by Ten Teachers, 19th ed, (pp. 85-108) India: Hodder & Stoughton.
- xvii Royal College of Obstetricians and Gynaecologists. Antepartum Haemorrhage. Green-top Guideline No. 63. 1st Ed. November 2011.
- xviii Symonds, E. M and Symonds, I. M. (2004). Essential Obstetrics and Gynaecology. 4th ed. Churchill Livingstone: Spain.
- xix Hamilton-Fairley, D.(2009) Lecture Notes: Obstetrics and Gynaecology. 3rd ed. Singapore: Wiley-Blackwell.
- xx Impey, L. and Child, T. (2012). Obstetrics and Gynaecology. 4th ed. Wiley-Blackwell: electronic version.
- xxi Hamilton-Fairley, D.(2009) Lecture Notes: Obstetrics and Gynaecology. 3rd ed. Singapore: Wiley-Blackwell..
- xxii Royal College of Obstetricians and Gynaecologists. Antepartum Haemorrhage. Green-top Guideline No. 63. 1st Ed. November 2011.
- xxiii Impey, L. and Child, T. (2012). Obstetrics and Gynaecology. 4th ed. Wiley-Blackwell: electronic version.
- xxiv Royal College of Obstetricians and Gynaecologists. Antepartum Haemorrhage. Green-top Guideline No. 63. 1st Ed. November 2011.
- xxv Kenny, L. C. (2011). Chapter 8: Antenatal Obstetric Complications. In Baker, P.H and Kenny, L. C (Eds) Obstetrics by Ten Teachers, 19th ed, (pp. 85-108) India: Hodder & Stoughton.
- xxvi Kenny, L. C. (2011). Chapter 8: Antenatal Obstetric Complications. In Baker, P.H and Kenny, L. C (Eds) Obstetrics by Ten Teachers, 19th ed, (pp. 85-108) India: Hodder & Stoughton.
- xxvii Impey, L. and Child, T. (2012). Obstetrics and Gynaecology. 4th ed. Wiley-Blackwell: electronic version.