

## PERINATAL EDUCATION PROGRAMME

### ANTEPARTUM HAEMORRHAGE

#### UNIT 4

##### OBJECTIVES

When you have completed this unit you should be able to:

1. Understand why an antepartum haemorrhage should always be regarded as serious.
2. Provide the initial management of a patient presenting with an antepartum haemorrhage.
3. Understand that it is sometimes necessary to deliver the fetus as soon as possible, in order to save the life of the mother or infant.
4. Diagnose the cause of the bleeding from the history and examination of the patient.
5. Correctly manage each of the causes of antepartum haemorrhage.
6. Diagnose the cause of a blood stained vaginal discharge and administer appropriate treatment.

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#### 4-1 WHAT IS AN ANTEPARTUM HAEMORRHAGE?

An antepartum haemorrhage is any vaginal bleeding which occurs at or after 24 weeks (estimated fetal weight at 24 weeks = 500 g) and before the birth of the infant. A bleed before 28 weeks is regarded as a threatened miscarriage as the fetus is usually considered not to be viable.

*\*\*\* A fetus is viable from 28 weeks or an estimated weight of 1000 g if the duration of pregnancy is uncertain. Antepartum haemorrhage before the fetus is viable has the same serious complications as that with a viable fetus. In both cases the management is the same except for fetal monitoring which is only done from 28 weeks (or 1000 g).*

#### 4-2 WHY IS AN ANTEPARTUM HAEMORRHAGE SUCH A SERIOUS CONDITION?

1. The bleeding can be so severe that it can endanger the life of both the mother and fetus.
2. Abruption placentae is a common cause of antepartum haemorrhage and an important cause of perinatal death in many communities.

Therefore, all patients who present with an antepartum haemorrhage must be regarded as serious emergencies until a diagnosis has been made. Further management will depend on the cause of the haemorrhage.

**ANY VAGINAL BLEEDING DURING PREGNANCY MAY BE AN IMPORTANT DANGER SIGN THAT MUST BE REPORTED IMMEDIATELY**

#### 4-3 WHAT ADVICE ABOUT VAGINAL BLEEDING SHOULD YOU GIVE TO ALL PATIENTS?

Every patient must be advised that any vaginal bleeding is potentially serious and told that this complication must be reported immediately.

#### 4-4 WHAT IS THE MANAGEMENT OF AN ANTEPARTUM HAEMORRHAGE?

The management consists of 4 important steps that should be carried out in the following order:

1. The maternal condition must be evaluated and stabilized, if necessary.
2. The condition of the fetus must then be assessed.
3. The cause of the haemorrhage must be diagnosed.
4. Finally, the definitive management of an antepartum haemorrhage, depending on the cause, must be given.

It must also be decided whether the patient should be transferred for further treatment.

#### **THE INITIAL, EMERGENCY MANAGEMENT OF ANTEPARTUM HAEMORRHAGE**

The management must always be provided in the following order:

1. Assess the condition of the patient. If the patient is shocked, she must be resuscitated immediately.
2. Assess the condition of the fetus. If the fetus is viable but distressed, an emergency delivery is needed.
3. Diagnose the cause of the bleeding, taking the clinical findings into account and, if necessary, the results of special investigations.

The initial management and diagnosis of a patient with vaginal bleeding is summarised in flow diagram 4-1.

**4-5 WHAT SYMPTOMS AND SIGNS INDICATE THAT THE PATIENT IS SHOCKED DUE TO BLOOD LOSS?**

1. Dizziness is the commonest symptom of shock.
2. On general examination the patient is sweating, her skin and mucous membranes are pale, and she feels cold and clammy to the touch.
3. The blood pressure is low and the pulse rate fast.

**4-6 HOW SHOULD YOU MANAGE A SHOCKED PATIENT WITH AN ANTEPARTUM HAEMORRHAGE?**

When there are symptoms and signs to indicate that the patient is shocked, you must:

1. Put up TWO intravenous infusions ("drips") with Plasmalyte B or Ringer's lactate, to run in quickly in order to actively resuscitate the patient.
2. Insert a Foley's catheter into the patient's bladder, to measure the urinary volume and to monitor further urine output.
3. If blood is available, take blood for cross-matching at the time of putting up the intravenous infusion and order 2 or more units of blood urgently.
4. Listen to the fetal heart:
  - (i) If fetal distress is present and the fetus is assessed to be viable (28 weeks or an estimated weight of 1000 g or more), then deliver by the quickest possible method, usually by caesarean section.
  - (ii) If fetal distress is excluded, if the fetus is too preterm to be viable, or if there is an intra-uterine death, then more attention can be given to the history and examination of the patient in order to make a diagnosis of the cause of the bleeding.

**4-7 WHAT MUST YOU DO IF A PATIENT PRESENTS WITH A LIFE THREATENING HAEMORRHAGE?**

The maternal condition takes preference over that of the fetus. The patient, therefore, is actively resuscitated while arrangements are made to terminate the pregnancy by caesarean section.

**DIAGNOSING THE CAUSE OF THE BLEEDING****4-8 SHOULD YOU TREAT ALL PATIENTS WITH ANTEPARTUM HAEMORRHAGE IN THE SAME WAY, IRRESPECTIVE OF THE AMOUNT AND CHARACTER OF THE BLEED?**

No. The management differs depending on whether the vaginal bleeding is diagnosed as a "haemorrhage" on the one hand, or a bloodstained vaginal discharge or a "show" on the other hand. A careful assessment of the amount and type of bleeding is, therefore, very important.

1. Any vaginal bleeding at or after 24 weeks must be diagnosed as an ANTEPARTUM HAEMORRHAGE if any of the following are present:
  - (i) A sanitary pad is at least partially soaked with blood.
  - (ii) Blood runs down the patient's legs.
  - (iii) A clot of blood has been passed.

A diagnosis of a haemorrhage always suggests a serious complication.

2. A BLOOD STAINED VAGINAL DISCHARGE will consist of a discharge mixed with a small amount of blood.
3. A "SHOW" will consist of a small amount of blood mixed with mucus.

If the maternal and fetal conditions are satisfactory, then a careful speculum examination should be done to exclude a local cause of the bleeding. Do NOT perform a digital vaginal examination, as this may cause massive haemorrhage if the patient has a placenta praevia.

**DO NOT DO A DIGITAL VAGINAL EXAMINATION UNTIL PLACENTA PRAEVIA HAS BEEN EXCLUDED**

**4-9 HOW DOES A SPECULUM EXAMINATION HELP YOU DETERMINE THE CAUSE OF THE BLEEDING?**

1. Bleeding through a closed cervical os confirms the diagnosis of a haemorrhage.
2. If the cervix is a few centimetres dilated with bulging membranes, or the presenting part of the fetus is visible, this suggests that the bleed was a "show".
3. A bloodstained discharge in the vagina, with no bleeding through the cervical os, suggests a vaginitis.
4. Bleeding from the surface of the cervix caused by contact with the speculum (i.e. contact bleeding) may indicate a cervicitis or cervical intra-epithelial neoplasia (CIN).
5. Bleeding from a cervical tumour or an ulcer may indicate an infiltrating carcinoma.

**4-10 CAN YOU RELY ON CLINICAL FINDINGS TO DETERMINE THE CAUSE OF A HAEMORRHAGE?**

In many cases the history and examination of the abdomen will enable the patient to be put into one of 2 groups:

1. Abruptio placentae (placental abruption).
2. Placenta praevia.

There are some patients in whom no reason for the haemorrhage can be found. Such a haemorrhage is classified as an antepartum haemorrhage of unknown cause.

**4-11 WHAT IS THE MOST LIKELY CAUSE OF AN ANTEPARTUM HAEMORRHAGE WITH FETAL DISTRESS?**

Abruptio placentae is the commonest cause of antepartum haemorrhage leading to fetal distress. However, sometimes there may be very little or no bleeding even with a severe abruptio placentae.

**AN ANTEPARTUM HAEMORRHAGE WITH FETAL DISTRESS OR FETAL DEATH IS ALMOST ALWAYS DUE TO ABRUPTIO PLACENTAE**

**4-12 WHAT IS THE MOST LIKELY CAUSE OF A LIFE-THREATENING ANTEPARTUM HAEMORRHAGE?**

A placenta praevia is the most likely cause of a massive antepartum haemorrhage that threatens the patient's life.

**ANTEPARTUM BLEEDING CAUSED BY ABRUPTIO PLACENTAE**

**4-13 WHAT IS ABRUPTIO PLACENTAE?**

Abruptio placentae (placental abruption) means that part or all of the normally implanted placenta has separated from the uterus before delivery of the fetus. The cause of abruptio placentae remains unknown.

**4-14 WHICH PATIENTS ARE AT INCREASED RISK OF ABRUPTIO PLACENTAE?**

Patients with:

1. A history of an abruptio placentae in a previous pregnancy. (There is a 10% chance of recurrence after an abruptio placentae in a previous pregnancy and a 25% chance after 2 previous pregnancies with an abruptio placentae).
2. Pre-eclampsia (gestational proteinuric hypertension), and to a lesser extent any of the other hypertensive disorders of pregnancy.
3. Intra-uterine growth restriction.

4. Cigarette smoking.
5. Poor socio-economic conditions.
6. A history of abdominal trauma, e.g. a fall or kick on the abdomen.

#### **4-15 WHAT SYMPTOMS POINT TO A DIAGNOSIS OF ABRUPTIO PLACENTAE?**

1. An antepartum haemorrhage which is associated with continuous, severe abdominal pain.
2. A history that the blood is dark red with clots.
3. Absence of fetal movements following the bleeding.

#### **4-16 WHAT DO YOU EXPECT TO FIND ON EXAMINATION OF THE PATIENT?**

1. The general examination and observations show that the patient is shocked, often out of proportion to the amount of visible blood loss.
2. The patient usually has severe abdominal pain.
3. The abdominal examination shows the following :
  - (i) The uterus is tonically contracted, hard and tender, so much so that the whole abdomen may be rigid.
  - (ii) Fetal parts cannot be palpated.
  - (iii) The uterus is bigger than the patient's dates suggest.
  - (iv) The haemoglobin concentration is low, indicating severe blood loss.
4. The fetal heart beat is almost always absent in a severe abruptio placentae.

These symptoms and signs are typical of a severe abruptio placentae. However, abruptio placentae may present with symptoms and signs which are less obvious, making the diagnosis difficult.

The management of abruptio placentae is summarised in flow diagram 4-II.

**THE DIAGNOSIS OF SEVERE ABRUPTIO PLACENTAE CAN USUALLY BE MADE FROM THE HISTORY AND PHYSICAL EXAMINATION**

#### **4-17 WHAT WOULD YOU DO IF THE FETAL HEART WAS STILL PRESENT?**

If the fetal heart is still present with an abruptio placentae, there will usually be signs of fetal distress. The infant will die in utero if not delivered immediately.

#### **4-18 HOW SHOULD YOU DECIDE ON THE METHOD OF DELIVERY IF THE FETAL HEART IS STILL PRESENT?**

1. If the symptoms and signs are typical of an abruptio placentae, a vaginal examination should be done.
2. If the cervix is at least 9 cm dilated, and the presenting part is well down in the pelvis, then the membranes should be ruptured and the infant delivered vaginally. If these conditions are not present, an emergency caesarean section should be done.
3. If the fetus is not viable, it should be delivered vaginally if the diagnosis is abruptio placentae.
4. While preparations for delivery are being made, the mother must be resuscitated and intra-uterine resuscitation of the fetus started. However, hexoprenaline or nifedipine must NOT be given to a patient who shows any evidence of shock. (Intra-uterine resuscitation is discussed fully in section 2-38).
5. When there is doubt about the diagnosis, specifically when placenta praevia cannot be excluded on history and examination, then a digital vaginal examination should NOT be done. If fetal distress is present and the fetus is viable, a caesarean section must be done. If there is neither fetal distress nor severe vaginal bleeding, the possibility of a placenta praevia must be investigated. An ultrasound examination or vaginal examination in theatre must then be done.

**4-19 WHAT SHOULD YOU DO IF THE FETAL HEART IS ABSENT?**

1. Active resuscitation of the mother is a priority and should have been started as part of the initial emergency management:
  - (i) Two intravenous infusion lines are usually needed, one of which can be a central venous pressure line inserted in the antecubital fossa.
  - (ii) Two units of fresh frozen plasma, and at least 4 units of whole blood are usually needed for effective resuscitation.
2. A Foley's catheter is inserted into the bladder.
3. The pulse rate and blood pressure must be checked every 15 minutes until the patient's condition stabilizes, and half-hourly thereafter. The urinary output must be recorded hourly.
4. The membranes are then ruptured, following which cervical dilatation and delivery of the fetus usually occur quickly.
5. Pain relief in the form of pethidine or morphine and promethazine (Phenegan) or hydroxyzine (Aterax) should be given once the patient is adequately resuscitated.

**4-20 WHY IS IT IMPORTANT TO REMEMBER THAT MANY PATIENTS WITH ABRUPTIO PLACENTAE HAVE UNDERLYING PRE-ECLAMPSIA?**

1. Signs of shock may be present even with a normal blood pressure. These patients, nevertheless, need active resuscitation.
2. After resuscitation a hypotensive patient may become hypertensive, so much so that dihydralazine (Nepresol) may have to be given parenterally or nifedipine (Adalat) orally.
3. Magnesium sulphate must be given if the patient develops imminent eclampsia.

*\*\*\* These patients are haemodynamically very unstable. Although initially they also require active resuscitation, they quickly become fluid overloaded, resulting in pulmonary oedema. Renal complications, such as acute tubular necrosis, commonly occur.*

**4-21 AT YOUR INITIAL ASSESSMENT OF THE PATIENT, HOW WOULD YOU KNOW WHETHER OR NOT THERE IS UNDERLYING PRE-ECLAMPSIA PRESENT?**

By finding protein in the patient's urine.

**ABRUPTIO PLACENTAE PLUS PRE-ECLAMPSIA IS A SERIOUS CONDITION WITH A HIGH RISK OF MATERNAL DEATH**

**4-22 WHAT COMPLICATION SHOULD YOU WATCH FOR AFTER DELIVERY?**

Postpartum haemorrhage, as this is common after abruptio placentae.

**4-23 WHAT ACTION SHOULD YOU TAKE TO PREVENT POSTPARTUM HAEMORRHAGE?**

1. Syntometrine 1 ampoule should be given intramuscularly, if the patient is not hypertensive. Only oxytocin is used in a hypertensive patient.
2. In addition, 20 units of oxytocin are put in the intravenous infusion bottle.
3. The uterus is rubbed up well.
4. The patient is carefully observed for bleeding.

**ANTEPARTUM BLEEDING CAUSED BY PLACENTA PRAEVIA****4-24 WHAT IS PLACENTA PRAEVIA?**

Placenta praevia means that the placenta is implanted either wholly or partially in the lower segment of the uterus. It may extend down to, or cover the internal os of the cervix. When the lower segment starts to form or the cervix begins to dilate, the placenta becomes partially separated and this causes maternal bleeding.

**4-25 WHICH PATIENTS HAVE THE HIGHEST RISK OF PLACENTA PRAEVIA?**

1. With regard to their previous obstetric history, patients who:
  - (i) Are grande multiparas, i.e. who are para 5 or higher.
  - (ii) Have had a previous caesarean section.
2. With regard to their present obstetric history, patients who:
  - (i) Have a multiple pregnancy.
  - (ii) Have had a threatened abortion, especially in the second trimester.
  - (iii) Have an abnormal presentation.

**4-26 WHAT IN THE HISTORY OF THE BLEEDING SUGGESTS THE DIAGNOSIS OF PLACENTA PRAEVIA?**

1. The bleeding is painless and bright red in colour.
2. Fetal movements are still present after the bleed.

**4-27 WHAT ARE THE TYPICAL FINDINGS ON PHYSICAL EXAMINATION IN A PATIENT WITH PLACENTA PRAEVIA?**

1. General examination may show signs that the patient is shocked, and the amount of bleeding corresponds to the degree of shock. However, the first bleed is usually not severe. The patient's haemoglobin concentration is normal or low depending on the amount of blood loss.
2. Examination of the abdomen shows that:
  - (i) The uterus is soft and not tender to palpation.
  - (ii) The uterus is not bigger than it should be for the patient's dates.
  - (iii) The fetal parts can be easily palpated, and the fetal heart is present.
  - (iv) There may be an abnormal presentation. Breech presentation or oblique or transverse lies are commonly present.
  - (v) In cephalic presentations, the head is not engaged and is easily ballotable above the pelvis.

**THE DIAGNOSIS OF PLACENTA PRAEVIA CAN USUALLY BE MADE FROM THE HISTORY AND PHYSICAL EXAMINATION**

**4-28 DO YOU THINK THAT ENGAGEMENT OF THE HEAD CAN OCCUR IF THERE IS A PLACENTA PRAEVIA PRESENT?**

No. If there is 2/5 or less of the fetal head palpable above the pelvic brim on abdominal examination, then placenta praevia can be excluded and a digital vaginal examination can be done safely. The first vaginal examination must always be done carefully, as explained in section 4-35.

The method of assessing the amount of head above the pelvic brim is discussed in skills workshop 8-1 of this PEP manual.

**TWO FIFTHS OR LESS OF THE FETAL HEAD PALPABLE ABOVE THE PELVIC BRIM EXCLUDES THE POSSIBILITY OF PLACENTA PRAEVIA**

**4-29 WHAT DO YOU UNDERSTAND BY A 'WARNING BLEED'?**

This is the first bleeding that occurs from a placenta praevia, when the lower segment begins to form at about 34 weeks, or even earlier.

**4-30 ARE THERE ANY INVESTIGATIONS THAT CAN CONFIRM THE DIAGNOSIS OF PLACENTA PRAEVIA?**

1. If the patient is less than 38 weeks pregnant and NOT BLEEDING ACTIVELY, an ultrasound examination must be done in order to localise the placenta.
2. If the patient is 38 or more weeks pregnant, and NOT BLEEDING ACTIVELY:
  - (i) If ultrasonology is available, an ultrasound examination can be done in order to localise the placenta.
  - (ii) If ultrasonology is not available, a digital vaginal examination can be done in theatre with everything ready for a caesarean section.

**4-31 WHAT ACTION SHOULD YOU TAKE IF A ROUTINE ULTRASOUND EXAMINATION EARLY IN PREGNANCY SHOWS A PLACENTA PRAEVIA?**

In most cases, the position of the placenta changes in relation to the internal os of the cervix as pregnancy continues. A follow-up ultrasound examination must be arranged at a gestational age of 32 weeks.

**4-32 WHAT IS THE FURTHER MANAGEMENT AFTER MAKING THE DIAGNOSIS OF PLACENTA PRAEVIA?**

1. If the patient is not bleeding actively, further management depends on the gestational age:
  - (i) With a gestational age of less than 38 weeks, the patient is hospitalized and managed conservatively until 38 weeks or until active bleeding starts.
  - (ii) If the fetus is viable (28 weeks or more) but the gestational age is less than 34 weeks, steroids must be given to stimulate fetal lung maturity (as described in Unit 5) as delivery may become necessary within a few days.
  - (iii) With a gestational age of 38 weeks or more, the fetus should be delivered.

The further management of a patient when her pregnancy has reached 36 weeks depends on the grade of placenta praevia as described in 4-34.

2. A patient who is actively bleeding must be delivered irrespective of the gestational age, because this is a life threatening condition for the patient. An emergency caesarean section or hysterotomy must be done.

The management of a patient with a placenta praevia is summarised in flow diagrams 4-III and 4-IV.

**4-33 WHEN A PATIENT WITH PLACENTA PRAEVIA IS LESS THAN 38 WEEKS PREGNANT AND IS BEING MANAGED CONSERVATIVELY, WHAT AMOUNT OF BLEEDING WOULD INDICATE THAT YOU SHOULD DELIVER THE FETUS?**

1. Any sudden, severe haemorrhage.
2. Any continuous, moderate bleeding, such that the drop in the patient's haemoglobin concentration requires a blood transfusion.

**4-34 HOW WILL YOU MANAGE A PATIENT FURTHER, WHO HAS BEEN TREATED CONSERVATIVELY?**

1. With a grade 3 or 4 placenta praevia, a caesarean section should be done at 36 weeks.
2. With a grade 2 placenta praevia, a caesarean section should be done at 38 weeks.
3. With a grade 1 placenta praevia which bleeds now, and a presenting part that remains above high the pelvis, a caesarean section should be done at 38 weeks.
4. With a grade 1 placenta praevia, which does not bleed and where the fetal head is engaged (2/5 or less palpable above the brim), you can wait for the spontaneous onset of labour. The first vaginal examination must be done very carefully as described in section 4-35.

**4-35 HOW DO YOU GO ABOUT DOING A VAGINAL EXAMINATION IN THEATRE?**

1. The theatre sister must be scrubbed up with her trolley ready.
2. The anaesthetist must be ready with his drugs drawn up so that, if necessary, he can proceed immediately with the induction of anaesthesia.
3. A careful digital examination is done. First feel in all four vaginal fornices:
  - (i) If there is soft tissue between the examining finger and the fetal skull, then placenta praevia is diagnosed.
  - (ii) If the fetal skull is easily felt in all four fornices, then a careful examination is done through the cervix.
  - (iii) If placental tissue is felt, then a caesarean section should be done. If not, the membranes can be ruptured with the aim of allowing a vaginal delivery.

**4-36 IF THE FETUS IS ALIVE, WHY IS URGENT DELIVERY OF LESS IMPORTANCE IN PLACENTA PRAEVIA THAN IN ABRUPTIO PLACENTAE?**

Compared with abruptio placentae, intra-uterine death is uncommon in placenta praevia. However, a serious vaginal bleed due to placenta praevia may still necessitate an immediate delivery, to save the mother's life.

**4-37 WHY HAVE PATIENTS WITH A PLACENTA PRAEVIA AN INCREASED RISK OF POSTPARTUM HAEMORRHAGE?**

The placenta was implanted in the lower segment which does not have the same ability as the upper segment to contract and retract after delivery. Therefore, the same measures taken with abruptio placentae must be taken to prevent postpartum haemorrhage.

**ANTEPARTUM HAEMORRHAGE OF UNKNOWN CAUSE****4-38 WHEN WOULD YOU SUSPECT AN ANTEPARTUM HAEMORRHAGE OF UNKNOWN CAUSE?**

In patients who fulfill ALL the following requirements:

1. Less severe antepartum bleeding, without signs of shock, and when the fetal condition is good.
2. When the history and examination do not suggest a severe abruptio placentae.
3. When local causes have been excluded on speculum examination.
4. When placenta praevia has been excluded by an ultrasound examination.

**4-39 WHAT SHOULD YOU DO TO EXCLUDE OTHER CAUSES OF BLEEDING IF YOU DO NOT HAVE ULTRASOUND FACILITIES ?**

1. Abruptio placentae can usually be excluded on history and examination.
2. Local causes are excluded on speculum examination.
3. With a gestational age of 38 weeks or more, a vaginal examination is done in theatre to confirm or exclude placenta praevia.
4. If the gestational age is less than 38 weeks, the patient must be admitted to hospital and close attention paid to fetal movements, especially in the first 24 hours.

*\*\*\* If available, antenatal fetal heart rate monitoring should be done on admission to hospital and every 6 hours during the first 24 hours.*

**4-40 WHAT IS THE MOST LIKELY CAUSE OF AN ANTEPARTUM HAEMORRHAGE OF UNKNOWN CAUSE?**

A small abruptio placentae that does not cause any other signs or symptoms. If the placental separation is going to extend, it will usually happen within the first 24 hours following the bleed. Therefore, the patient must be hospitalized and closely observed during this period for signs of fetal distress.

**4-41 HOW SHOULD YOU MANAGE A PATIENT WITH AN ANTEPARTUM HAEMORRHAGE OF UNKNOWN CAUSE?**

1. The patient is hospitalized.
2. Careful attention is given to fetal movements, especially during the first 24 hours.

\*\*\* *If available, a cardiotocogram must be recorded on admission and then every 6 hours during the first 24 hours.*

3. If there is no further bleeding in the next 48 hours, the patient is discharged. She must abstain from coitus during the rest of her pregnancy.
4. The patient is followed up weekly as a high risk patient, and is advised to report immediately, if there is any decrease in fetal movements, or further bleeding. No digital vaginal examination must be done.
5. The patient is allowed to go into spontaneous labour at term.

**A PATIENT WITH AN ANTEPARTUM HAEMORRHAGE OF UNKNOWN CAUSE MUST BE CLOSELY OBSERVED FOR FETAL DISTRESS DURING THE FIRST 24 HOURS AFTER THE BLEED**

**4-42 WHY IS AN ANTEPARTUM HAEMORRHAGE OF UNKNOWN CAUSE ALWAYS REGARDED IN A SERIOUS LIGHT?**

There is the possibility that abruptio placentae may be present. If the abruptio placentae is going to extend, intra-uterine death may result. The risk of such an event is greatest during the 24 hours following the bleed.

\*\*\* *Antepartum haemorrhage due to vasa praevia:*

*This rare cause of antepartum haemorrhage occurs when the vessels of the umbilical cord cross the membranes near to the internal os. When the membranes rupture, a small amount of continuous bright red bleeding occurs. The blood is from the fetal circulation and, therefore, the fetus can bleed to death. If the cervix is almost fully dilated, the fetus can be delivered vaginally. If not, a caesarean section must be done.*

*The presence of fetal blood is confirmed by performing the sodium hydroxide test (Apt test): To 9 drops of 1% sodium hydroxide in a glass test tube add 1 drop of blood. Read at 1 minute. If the blood is fetal, the mixture remains pink. However, if the blood is maternal, the mixture becomes brown.*

**REFERRAL OF A PATIENT WITH AN ANTEPARTUM HAEMORRHAGE****4-43 HOW SHOULD YOU DECIDE WHETHER A PATIENT CAN BE MANAGED LOCALLY OR SHOULD BE TRANSFERRED?**

1. Clinics and level 1 hospitals which do not have blood available must refer all patients with an antepartum haemorrhage.
2. Level 1 hospitals which have blood available, and level 2 hospitals, must manage patients with the following problems:
  - (i) A life threatening bleed from placenta praevia.
  - (ii) Fetal distress present with a viable fetus.
  - (iii) Abruptio placentae with a live, viable fetus.
3. Abruptio placentae with a dead fetus must be managed in at least a level 2 hospital, because of the risk of clotting defects.
4. A patient with abruption placenta and pre-eclampsia must be referred to a level 3 hospital as this patient is at high risk of pulmonary oedema and acute tubular necrosis.
5. A patient with a grade 3 or 4 placenta praevia and a viable fetus of less than 34 weeks, who is going to be managed conservatively, should be managed in at least a level 2 hospital, with a neonatal intensive care unit, or a level 3 hospital

**4-44 WHEN YOU REFER A PATIENT, WHAT PRECAUTIONS SHOULD YOU TAKE TO ENSURE THE SAFETY OF THE PATIENT IN TRANSIT?**

1. A shocked patient should have 2 intravenous infusion lines with Plasmalyte B or Ringer's lactate running in fast. A doctor should accompany the patient if possible. If not possible, a registered nurse should accompany her.
2. A patient who is no longer bleeding, should also have an intravenous infusion, and be accompanied by a registered nurse, whenever possible.

**A BLOOD STAINED VAGINAL DISCHARGE****4-45 HOW DOES A PATIENT DESCRIBE A BLOOD STAINED VAGINAL DISCHARGE?**

As a vaginal discharge mixed with a small amount of blood.

**4-46 HOW DOES A PATIENT DESCRIBE A "SHOW"?**

As a slight vaginal bleed consisting of blood mixed with mucus.

**4-47 HOW SHOULD YOU MANAGE A PATIENT WITH A HISTORY OF A BLOOD STAINED VAGINAL DISCHARGE OR A "SHOW"?**

1. After getting a good history and ensuring that the condition of the fetus is satisfactory, a careful speculum examination should be done.
2. The speculum is only inserted for 5 cm, carefully opened, and then introduced further until the cervix can be seen.
3. Any bleeding through a closed cervical os indicates an antepartum haemorrhage.
4. A "show" is the most likely cause, if the cervix is a few centimetres dilated, with bulging membranes, or if the presenting part of the fetus is visible.
5. A vaginitis is the most likely cause, if a blood stained discharge is seen in the vagina.

**4-48 HOW SHOULD YOU TREAT A BLOOD STAINED DISCHARGE DUE TO VAGINITIS IN PREGNANCY?**

1. If a microscope is available, make a wet smear of the discharge. The specific organism causing the vaginitis can then be identified and treated.

\*\*\* *A wet smear of the discharge is made, in both saline and 2% potassium hydroxide and examined.*

2. If a microscope is not available:
  - (i) Organisms identified on the cervical cytology smear are the most likely cause of the vaginitis.
  - (ii) If no organisms are identified on the cytology smear, or a smear was not done, then *Trichomonas vaginalis* is most probably present.

To treat a Trichomonal vaginitis, both the patient and her partner should receive a single dose of 2 g metronidazole (Flagyl) orally.

**4-49 SHOULD METRONIDAZOLE BE USED DURING PREGNANCY?**

Metronidazole should not be used in the first trimester of pregnancy, unless absolutely necessary, as it may cause congenital abnormalities in the fetus. The patient and her partner must be warned that metronidazole causes severe nausea and vomiting if it is taken with alcohol. The risk of congenital abnormalities caused by alcohol may also be increased by metronidazole.

**4-50 HOW DO YOU MANAGE A PATIENT WITH CONTACT BLEEDING?**

1. When there is normal cervical cytology (Papanicolaou smear), the contact bleeding is probably due to a cervicitis. If it is troublesome, the patient should be given a course of oral erythromycin 500 mg 6 hourly for 7 days.
2. With abnormal cervical cytology, the patient should be managed as described in Unit 1. Cervical intra-epithelial neoplasia causes contact bleeding.

**4-51 WHAT ACTION SHOULD YOU TAKE WHEN THE BLEEDING IS FROM A CERVICAL ULCER OR TUMOUR?**

The patient most probably has an infiltrating cervical carcinoma and should be managed as described in unit 1 of this PEP manual.

*\*\*\* When there is doubt about the diagnosis, a cytology smear and biopsy of the lesion must be taken. The results should be obtained as soon as possible.*

**CASE PROBLEMS****CASE 1**

A patient who is 35 weeks pregnant, presents with a history of vaginal bleeding.

**1. Why does this patient need to be assessed urgently?**

Because an antepartum haemorrhage should always be regarded as an emergency, until a cause for the bleeding is found. Thereafter, the correct management can be given.

**2. What is the first step in the management of a patient with an antepartum haemorrhage?**

The clinical condition of the patient must be assessed. Special attention must be paid to signs of shock. If shock is present, resuscitation must be started urgently.

**3. What is the next step in the management of a patient with an antepartum haemorrhage?**

The condition of the fetus must be assessed. The presence of fetal distress will influence the choice of management.

**4. What should be done once the condition of the patient and her fetus have been assessed, and the patient resuscitated, if necessary?**

The cause of the antepartum haemorrhage must be sought and managed.

**CASE 2**

A patient who is 32 weeks pregnant, according to her antenatal card, presents with a history of severe vaginal bleeding and abdominal pain. The blood contains dark clots. Since the haemorrhage, the patient has not felt her fetus move. The patient's blood pressure is 80/60 mm Hg and the pulse rate 120 beats per minute.

**1. What is your clinical diagnosis?**

The history is typical of an abruption placentae.

**2. If the clinical examination confirms the diagnosis, what should be the first step in the management of this patient?**

The patient's blood pressure and pulse rate indicate that she is shocked. Therefore, she must first be resuscitated.

**3. What is the next step in the management of the patient, that requires urgent attention?**

As the fetus is viable, it is of great importance to establish whether the fetus is still alive. Therefore, it must be urgently established whether the fetal heart beat is present or not.

**4. How should you manage the patient, if a fetal heart beat is heard?**

A vaginal examination must be done. If the cervix is 9 cm or more dilated and the fetal head is on the pelvic floor, then the membranes should be ruptured and the fetus delivered vaginally as quickly as possible. Otherwise, an emergency caesarean section must be done as soon as the patient has been resuscitated. Immediately before starting the caesarean section, make sure that the fetal heart is still present.

**5. Should the above patient be transferred to a level 2 or 3 hospital for delivery, if the fetus is still alive?**

The patient should be delivered in any hospital which has facilities for doing a caesarean section. Moving the patient because the fetus is regarded as preterm may result in an intra-uterine death during transport. If necessary, the newborn infant can be transported to a level 2 hospital with a neonatal intensive care unit. The risk of a clotting defect is low if the fetus is still alive.

**6. How should you manage this patient if a fetal heart beat is not heard?**

The membranes should be ruptured and the fetus delivered vaginally, if possible.

**CASE 3**

A patient is seen at the antenatal clinic at 35 weeks gestation with a breech presentation. The patient is referred to see the doctor the following week, for an external cephalic version. That evening she has a painless, bright red vaginal bleed.

**1. What is your diagnosis?**

The history and the presence of an abnormal lie suggest that the bleeding is the result of a placenta praevia.

**2. What should be the initial management of the patient?**

The condition of the mother should first be assessed and the patient resuscitated, if necessary. Then the fetal condition must be assessed. The patient's abdomen should also be examined, to determine whether the clinical signs support the diagnosis of placenta praevia.

**3. How should the patient be managed, if she should have a severe bleed?**

An emergency caesarean section must be done, as soon as the patient has been adequately resuscitated.

**4. What investigations should be done, if the patient is not bleeding actively during your initial clinical examination?**

A ultrasound examination must be done to confirm the clinical diagnosis. After placenta praevia has been excluded, a careful speculum examination should be done to exclude any local cause for the bleeding.

**5. How should the patient be managed, if she has had no further severe bleeding after the initial bleed?**

She should be hospitalized and managed conservatively until 36 or 38 weeks gestation, or until she starts to bleed actively again. Depending on the degree of placenta praevia, a caesarean section should be done at 36 or 38 weeks or spontaneous labour can be awaited.

**CASE 4**

A patient books for antenatal care at 30 weeks gestation. When you inform her of the danger signs during pregnancy, she says that she has had a vaginal discharge for the past 2 weeks. At times the discharge has been blood stained.

**1. Has this patient had a antepartum haemorrhage?**

The history suggests a blood stained vaginal discharge rather than an antepartum haemorrhage.

**2. What is the most probable cause of the blood stained vaginal discharge?**

A vaginitis. This can usually be confirmed by a speculum examination.

**3. How can the cause of the vaginitis be determined?**

During the speculum examination, a sample of the discharge should be taken and a wet smear made. Organisms seen on the wet smear are probably the cause of the vaginitis.

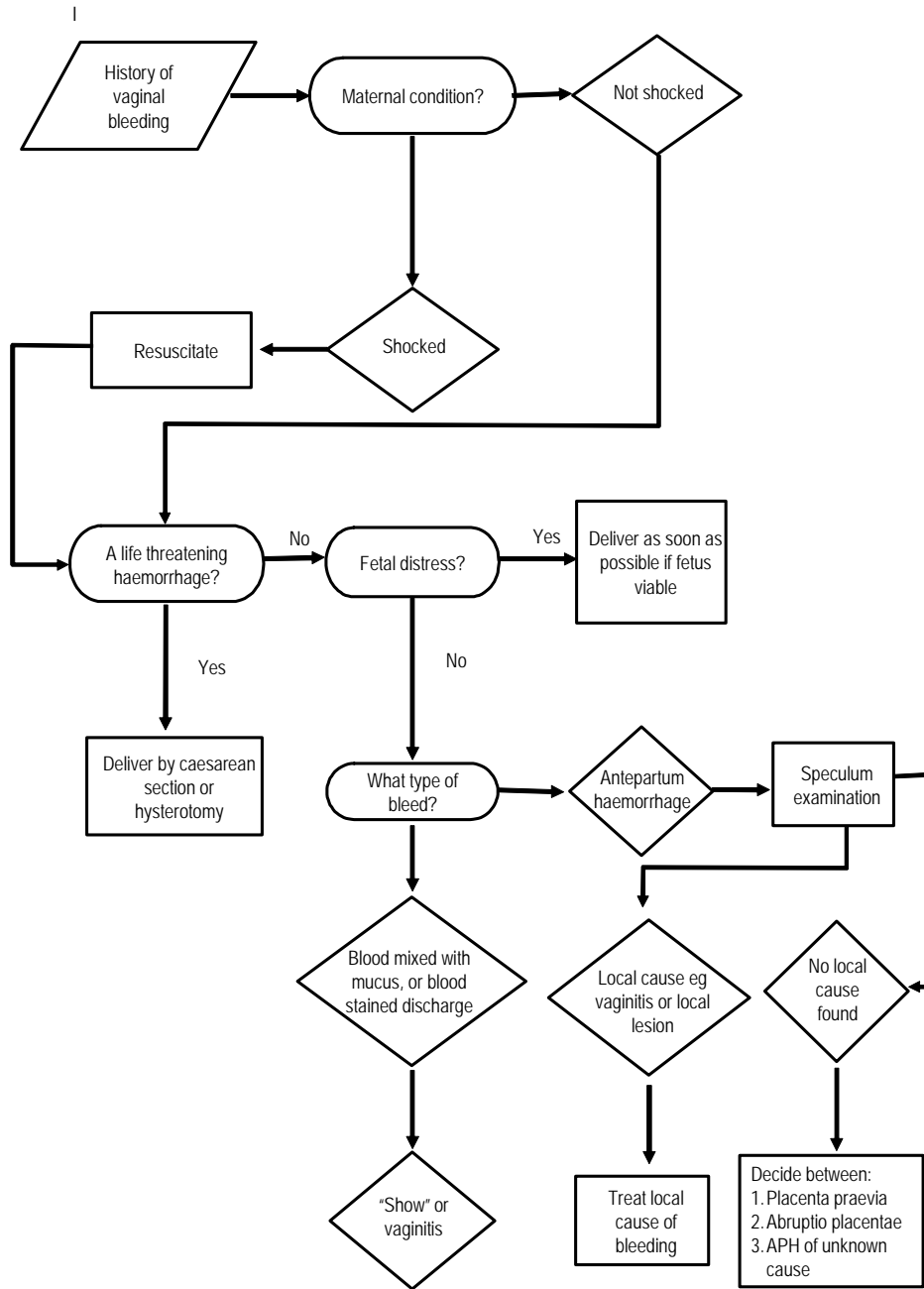
**4. What is the most likely cause of a vaginitis with a blood stained discharge?**

Trichomonas vaginalis. Therefore, if a microscope is not available, Trichomonas vaginalis is presumed to be the cause of the vaginitis.

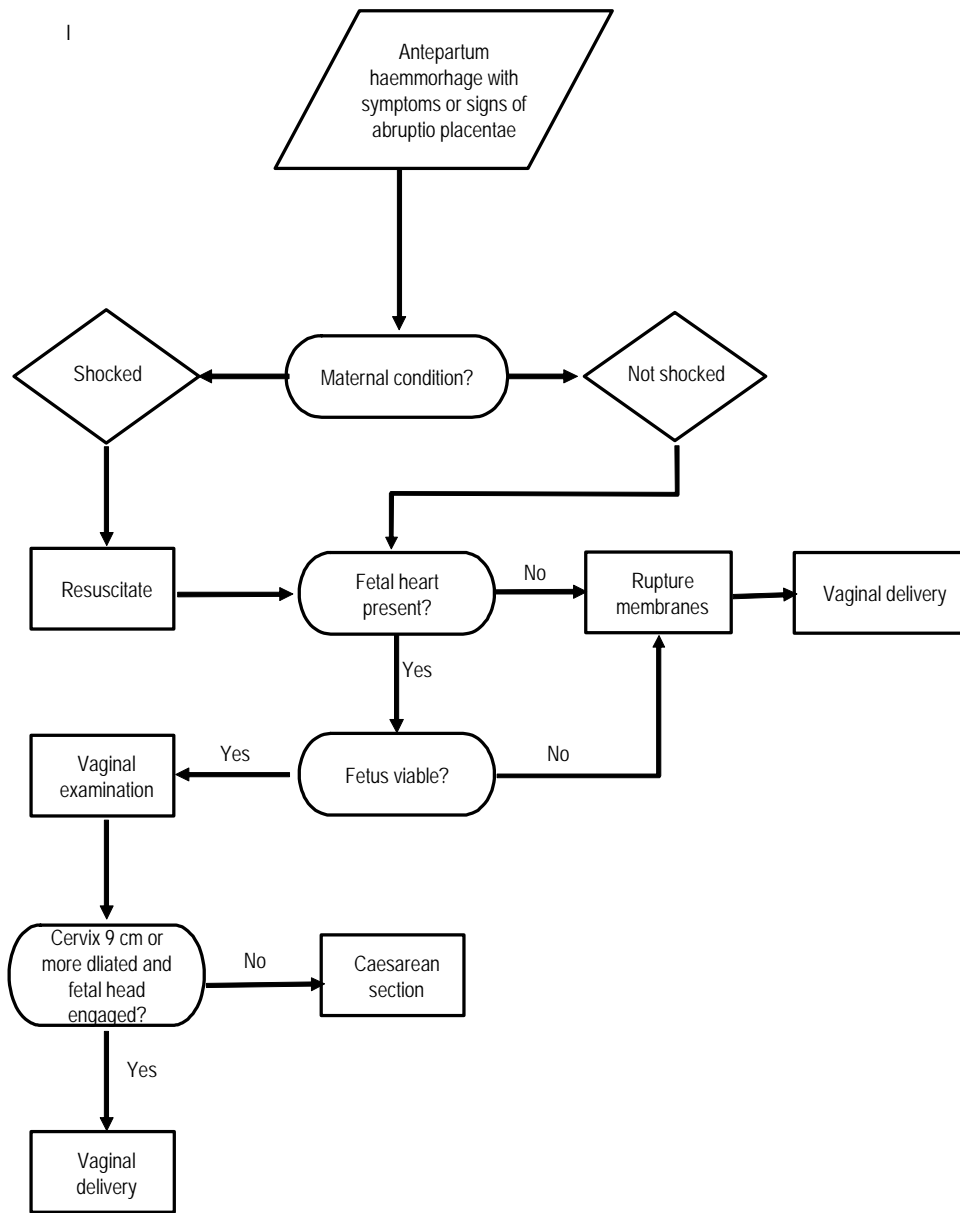
**5. How should you treat a patient with Trichomonal vaginitis?**

A single dose of 2 g metronidazole (Flagyl) is given orally to both the patient and her partner. Both must be warned against drinking alcohol for a few days after taking metronidazole.

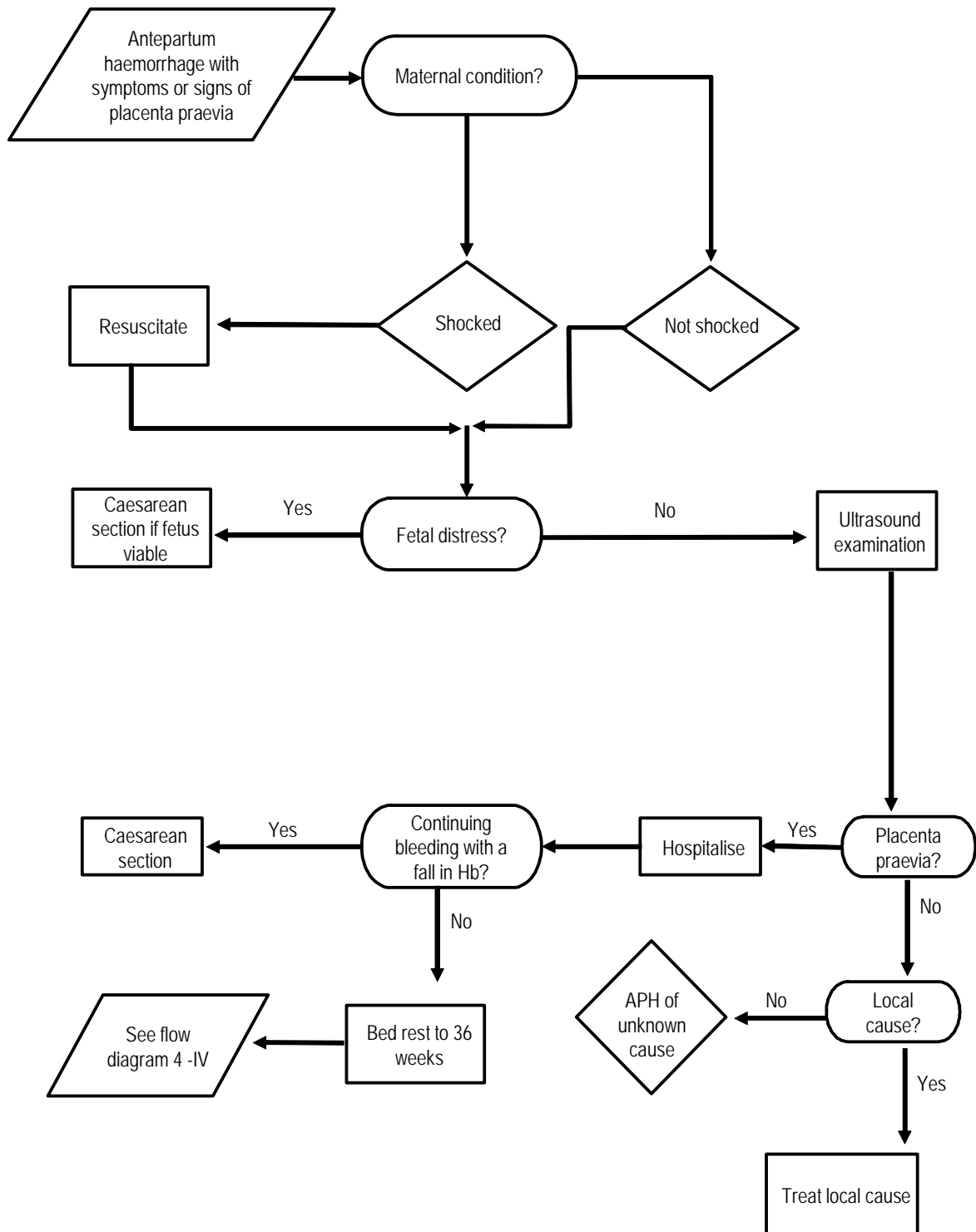
Flow diagram 4-1. Initial management of a patient with vaginal bleeding.



Flow diagram 4-II. Management of a patient with an abruptio placentae.



Flow diagram 4-III. Management of a patient with a placenta praevia before 36 weeks.



Flow diagram 4-IV. Management of a patient with a placenta praevia at 36 weeks or more.

