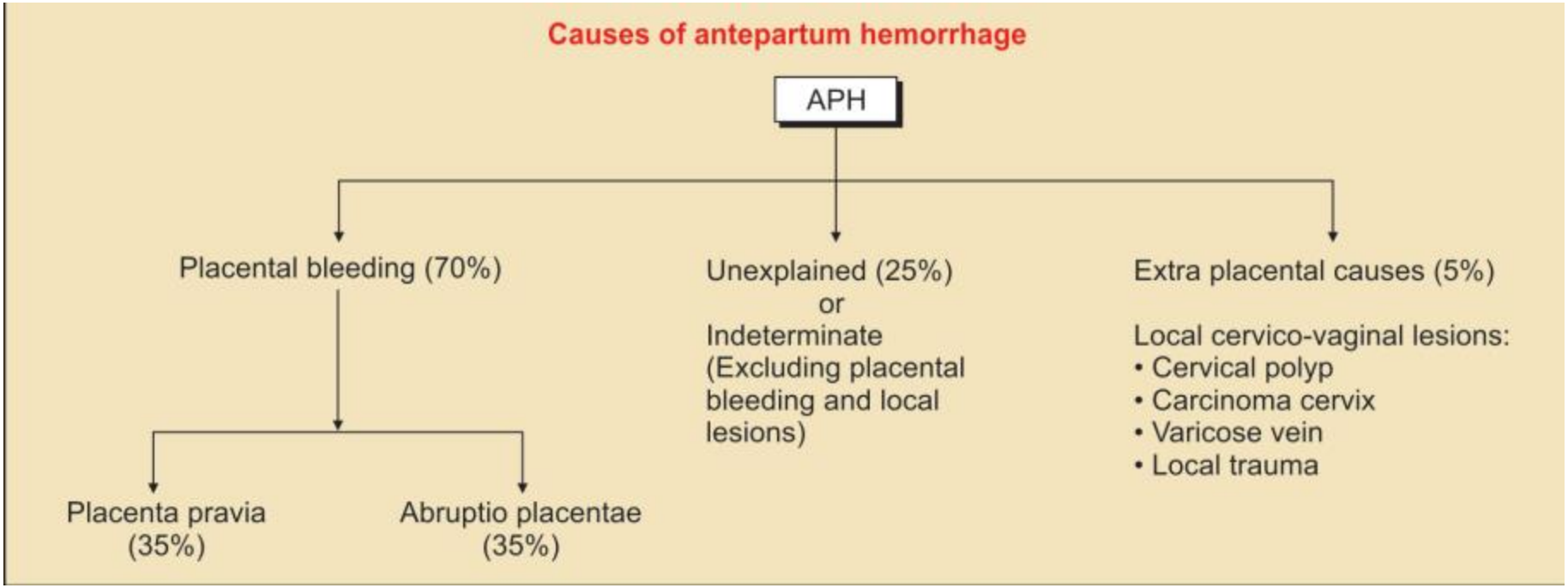
Antepartum haemorrhage (APH)

is bleeding from the genital tract in pregnancy at

24wks gestation before onset of labour.

the first and second stage of labor are thus included.

Causes of antepartum hemorrhage



Causes of antepartum haemorrhage

1• Unexplained (97%): usually marginal placental bleeds (i.e. minor placental abruptions).
2• Placenta praevia (1%).
3• Placental abruption (1%).
4• Others (1%), including:

a• Maternal:
• incidental (cervical erosion/ectropion)
• local infection of cervix/vagina
• a 'show'
• genital tract tumours
• varicosities
• trauma.

b• Fetal: vasa praevia.
There may be rapid and severe haemorrhage from a placenta praevia.
Most bleeding from an abruption is concealed

Vasa praevia

• This occurs when the fetal vessels run in membranes below the presenting fetal part, unsupported by placental tissue or umbilical cord.
• Incidence is 1:2500 to 1:2700.
• May present with PV bleeding after rupture of fetal membranes followed by rapid fetal distress (from exsanguination).
• Reported fetal mortality ranges between 33% and 100%.
• Risk factors include:
1• low-lying placenta
2• multiple pregnancy
3• IVF pregnancy
4• bilobed and especially succenturiate lobed placentas.

Women with placenta praevia or placental abruption may present with typical symptoms and signs and with recognized risk factors.

However,there may be minimal or no per vaginum (PV) loss in a large abruption and an abruption is usually, but not always, painful.

Initial assessment:

Rapid assessment of maternal and fetal condition is a vital first step as it may prove to be an obstetric emergency.

History

A basic clinical history should establish:

1• Gestational age.

2• Amount of bleeding (but don't forget concealed abruption).

3• Associated or initiating factors (coitus/trauma).

4• Abdominal pain.

5• Fetal movements.

6• Date of last smear.

7• Previous episodes of PV bleeding in this pregnancy.

8• Leakage of fluid PV.

9• Previous uterine surgery (including CS).

10• Smoking and use of illegal drugs (especially cocaine).

11• Blood group and rhesus status (will she need anti-D?).

12• Previous obstetric history (placental abruption/intrauterine growth restriction (IUGR), placenta praevia).

13• Position of placenta, if known from previous scan.

1.Maternal assessment

This should include:

- BP.
- Pulse.
- Other signs of haemodynamic compromise (e.g. peripheral vasoconstriction or central cyanosis).
- Uterine palpation for size, tenderness, fetal lie, presenting part (if it is engaged, it is not a placenta praevia).

Remember, never perform a vaginal examination (VE) in presence of PV bleeding without first excluding a placenta praevia (‘No PV until no PP’).

Once a placenta praevia is excluded, a speculum examination should be undertaken to assess degree of bleeding and possible local causes of bleeding (trauma, polyps, ectropion), and to determine if membranes are ruptured.

A digital examination ascertains cervical changes indicative of labour

2.Fetal assessment

- Establish whether a fetal heart can be heard.
- Ensure that it is fetal and not maternal (remember, the mother may be very tachycardic).
- If fetal heart is heard and gestation is estimated to be 26wks or more, FHR monitoring should be commenced.

Placenta praevia (PP)

Definition

When the placenta is inserted, wholly or in part, into the lower segment of the uterus.

Major (grade III or IV)

The placenta lies over the cervical os.

Cervical effacement and dilatation would result in catastrophic bleeding and potential maternal and therefore fetal death.

Minor (grade I or II)

The placenta lies in the lower segment, close to or encroaching on the cervical os.

Incidence

About 0.5% of pregnancies at term.

Diagnosis

Transvaginal USS is safe and is more accurate than transabdominal USS in locating the placenta.

DIAGNOSIS cont…

Painless and recurrent vaginal bleeding in the second half of pregnancy should be taken as placenta previa unless proved otherwise. Ultrasonography is the initial procedure either to confirm or to rule out the diagnosis.

I. Localization of placenta (placentography) II. Clinical

- Sonography
  - Transabdominal ultrasound (TAS)
  - Transvaginal ultrasound (TVS)
  - Transperineal ultrasound
  - Color Doppler flow study
  - By internal examination (double set up examination)
  - Direct visualization during cesarean section
  - Examination of the placenta following vaginal delivery
- Magnetic resonance imaging (MRI)

TYPES OR DEGREES: There are four types of placenta previa depending upon the degree of extension

of placenta to the lower segment.

Type—I (Low-lying): The major part of the placenta is attached to the upper segment and only the lower

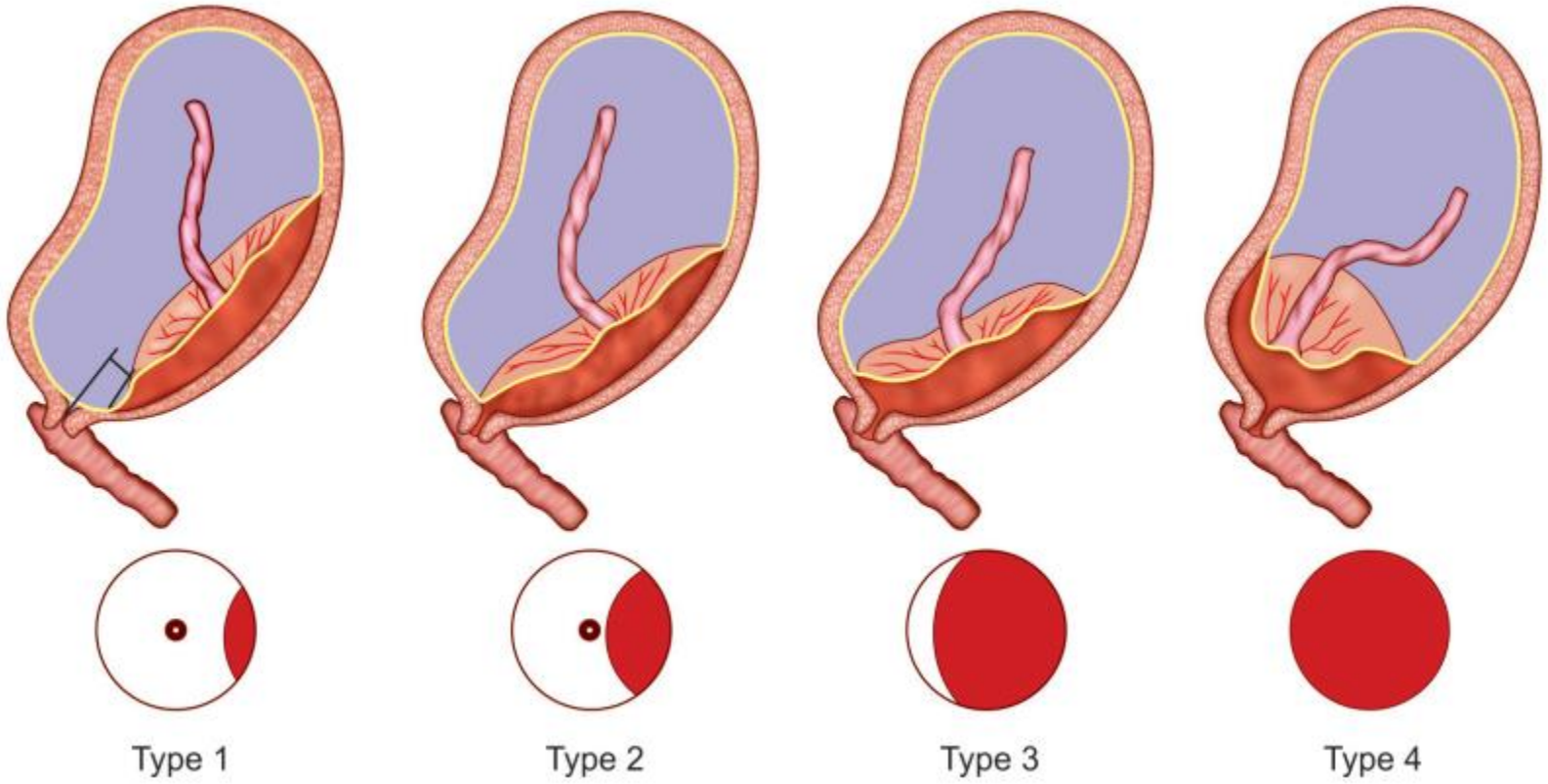
margin encroaches onto the lower segment but not up to the os.

Type—II (Marginal): The placenta reaches the margin of the internal os but does not cover it.

Type—III (Incomplete or partial central): The placenta covers the internal os partially (covers the internal os

when closed but does not entirely do so when fully dilated).

Type—IV (Central or total): The placenta completely covers the internal os even after it is fully dilated


Type 1
Type 2
Type 3
Type 4

high risk factors for placenta previa are — (a) Multiparity (b) Increased maternal age (> 35 years)(c)

History of previous cesarean section or any other scar in the uterus (myomectomy or hysterotomy) (d) Placental

size (mentioned before) and abnormality (succenturiate lobes) (e) Smoking — causes placental hypertrophy to

compensate carbon monoxide induced hypoxemia. (f) Prior curettage.

SIGNS:

1.General condition and anemia are proportionate to the visible blood loss..

2.**Abdominal examination:**

- **the size of the uterus** is proportionate to the period of gestation.
- **the uterus feels** relaxed, soft and elastic without any localized area of tenderness.
- **Persistence of malpresentation** like breech or transverse or unstable lie is more frequent. there is also increased frequency of twin pregnancy.
- **the head is "floating** in contrast to the period of gestation. Persistent displacement of the fetal head is very suggestive. the head cannot be pushed down into the pelvis.
-

Fetal heart sound is usually present, unless there is major separation of the placenta with the patient in exsanguinated condition.

Slowing of the fetal heart rate on pressing the head down into the pelvis which soon recovers promptly as the pressure is released is suggestive of the presence of low lying placenta especially of posterior type *(***Stallworthy's sign***).* But this sign is not always signifcant because it may be due to fetal head compression even in an otherwise normal case.

3.Vulval inspection:

Only inspection is to be done to note whether the bleeding is still occurring or has ceased, character of the blood—bright red or dark colored and the amount of blood loss—to be assessed from the blood-stained clothing. **In placenta previa**, **the blood is bright red** as the bleeding occurs from the separated uteroplacental sinuses close to the cervical opening and escapes out immediately.

4.**Vaginal examination must not be done** outside the operation theater in the hospital, as it can provoke further separation of placenta with torrential hemorrhage and may be fatal. It should only be done prior to termination of pregnancy in the operation theater under anesthesia, keeping everything ready for cesarean section.

Management

A• Women with major PP who have previously bled should be admitted from 34wks gestation.

B• Women with asymptomatic major PP may remain at home if they:

1• are close to the hospital

2• are fully aware of the risks to themselves and their baby

3• have a constant companion

4• have telecommunication and transport.

Delivery is likely to be by CS if the placental edge is <2cm from the internal os, especially if it is posterior or thick.

management

Following assessment, women will fall into one of two categories:

A• Bleeding heavy and continuing, mother or fetus is/soon will be compromised .

B• Bleeding minor, or settling, and neither mother nor fetus compromised:

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Management of placenta previa

(a) Expectant: pregnancy is preterm (<37 weeks), no active bleeding and the fetus is reactive (CTG), patient is admitted and managed expectantly

(b) **Active intervention**: Presence of active bleeding, term pregnancy, patient in labor or with non-reassuring fetal status – Delivery.

Limited antepartum haemorrhage (APH)

If bleeding was minor, is settling, and there are no signs of compromise ,investigations should be undertaken.

1.Maternal management

- FBC.
- Kleihauer testing, if woman known to be RhD –ve, to determine extent of feto-maternal haemorrhage and if more anti-D is required.
- Group and save serum.
- Coagulation screen may be useful in cases of suspected abruption.

* In the event of APH, all RhD –ve women require 500IU of anti-D immunoglobulin, unless they are already sensitized. More anti-D may be required based on the result of the Kleihauer test.

2.Fetal management

- Ultrasound to establish fetal well-being (growth/volume of amniotic fluid) and to confirm placental location.
- Umbilical artery Doppler measurement (the function of the placenta may be compromised by small abruptions).

Ongoing antenatal management

• Most units admit women who have had an APH for 24h, as the risk of further bleeding is estimated to be greatest during that time.

• If the bleeding settles and mother is discharged, a clear plan for the remaining pregnancy should be made including extra fetal surveillance of growth and well-being.

• Surveillance after due date may need to be increased.

* Management must be individualized according to suspected cause of bleeding, gestation, fetal assessment, and continuing maternal risk factors.

* Management of women with a minor placenta praevia and minimal or no ongoing PV bleeding at an early gestation is controversial.

All women who have had an APH are high-risk.

* Surveillance of both mother and fetus.
*History of APH i risk of bleeding at delivery ‘APH=post-partum haemorrhage (PPH)’.

Maternal complications of placenta previa are: hemorrhage (antepartum, intrapartum, postpartum), retained placenta (placenta accreta), increased operative delivery and death.

Fetal complications of placenta previa are: Prematurity, asphyxia, IUFD and increased perinatal mortality.

Delivery is planned based on the sonographic location of placenta. Women with placenta previa with placental edge within 2 cm of internal os are delivered by cesarean section. Otherwise vaginal delivery may be allowed

Placental abruption

Definition

Placenta separates partly or completely from uterus before delivery of fetus. Blood accumulates behind placenta in uterine cavity or is lost through cervix.

Types

- *Concealed:* no external bleeding evident (<20%).
- *Revealed:* vaginal bleeding

Risk factors for placental abruption are:

increased maternal age

increased parity

hypertension

Thrombophilia

rapid uterine decompression (polyhydramnios),

trauma

smoking.

Presentation

1• Usually present with abdominal pain.
2• Typically sudden onset, constant, and severe.
3• Posterior placentas may give rise to severe backache.
4• The uterus is tender on palpation.
5• Uterine activity is common.
6• Uterus may later become hard (often described as ‘woody’).
7• Many will be in labour (up to 50% on presentation).
8• Bleeding is very variable, often dark.
9• Maternal signs of shock.
10• Fetal distress is common and precedes fetal death.

Remember, extent of the maternal haemorrhage may be much greater than apparent vaginal loss.

Incidence 0.5–1.0% of pregnancies.

Diagnosis Made clinically.
Ultrasound is of use to confirm fetal wellbeing and exclude placenta praevia.

Management

- Admit all women with vaginal bleeding or unexplained abdominal pain.
- Establish immediate fetal well-being with CTG.

Arrange USS as soon as possible.

- Access and bloods .
- If fetal distress or maternal compromise, resuscitate and deliver.
- If no fetal distress, and bleeding and pain cease, consider delivery by term.

Management of placental abruption CONT..

depends on severity of placental abruption, gestational age and condition of the mother and the fetus.

Delivery is done in most cases of placental abruption. Betamethasone is given to accelerate fetal lung maturation.

Expectant management of placental abruption is rarely done.

ble 19.1: Distinguishing Features of Placenta Previa and Abruptio Placentae

ameters	Placenta Previa	Abruptio Placentae
Clinical features:		
• Nature of bleeding	(a) Painless, apparently causeless and recurrent (b) Bleeding is always revealed	(a) Painful, often attributed to preeclampsia or trauma and continuous (b) Revealed, concealed or usually mixed
• Character of blood	Bright red	Dark colored
• General condition and anemia	Proportionate to visible blood loss	Out of proportion to the visible blood loss in concealed or mixed variety
• Features of preeclampsia	Not relevant	Present in one-third cases
Abdominal examination:		
• Height of uterus	Proportionate height to gestational age	May be disproportionately enlarged in concealed type
• Feel of uterus	Soft and relaxed	May be tense, tender and rigid
• Malpresentation	Malpresentation is common. The head is high floating	Unrelated, the head may be engaged
• FHS	Usually present	Usually absent especially in concealed type
Placentography (USG)	Placenta in lower segment	Placenta in upper segment
Vaginal examination	Placenta is felt on the lower segment	Placenta is not felt on lower segment. Blood clots should not be confused with placenta