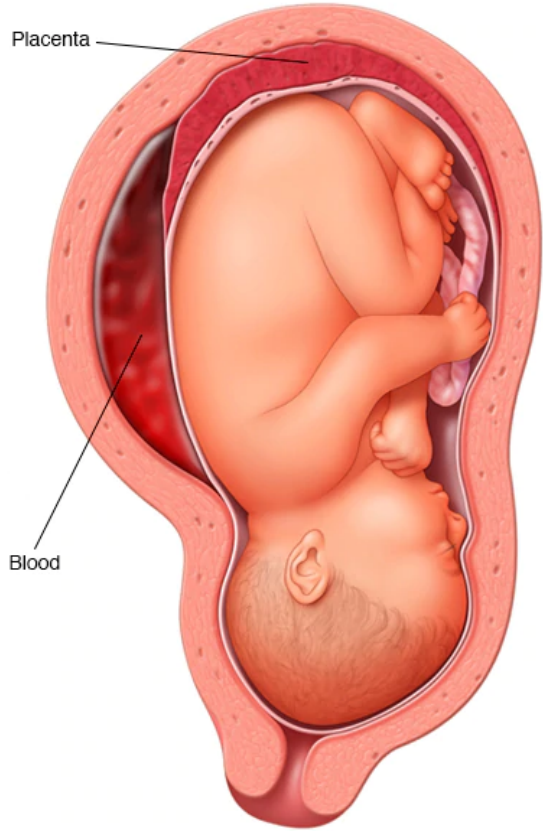
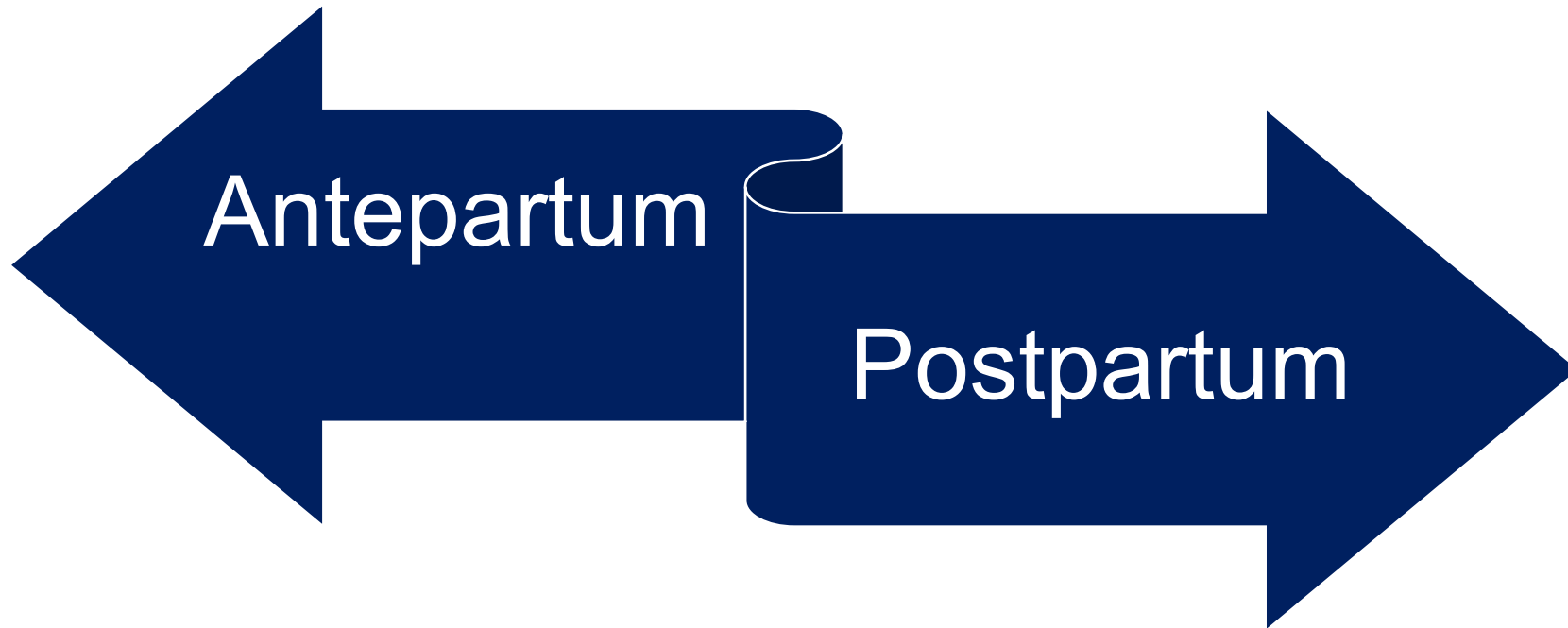


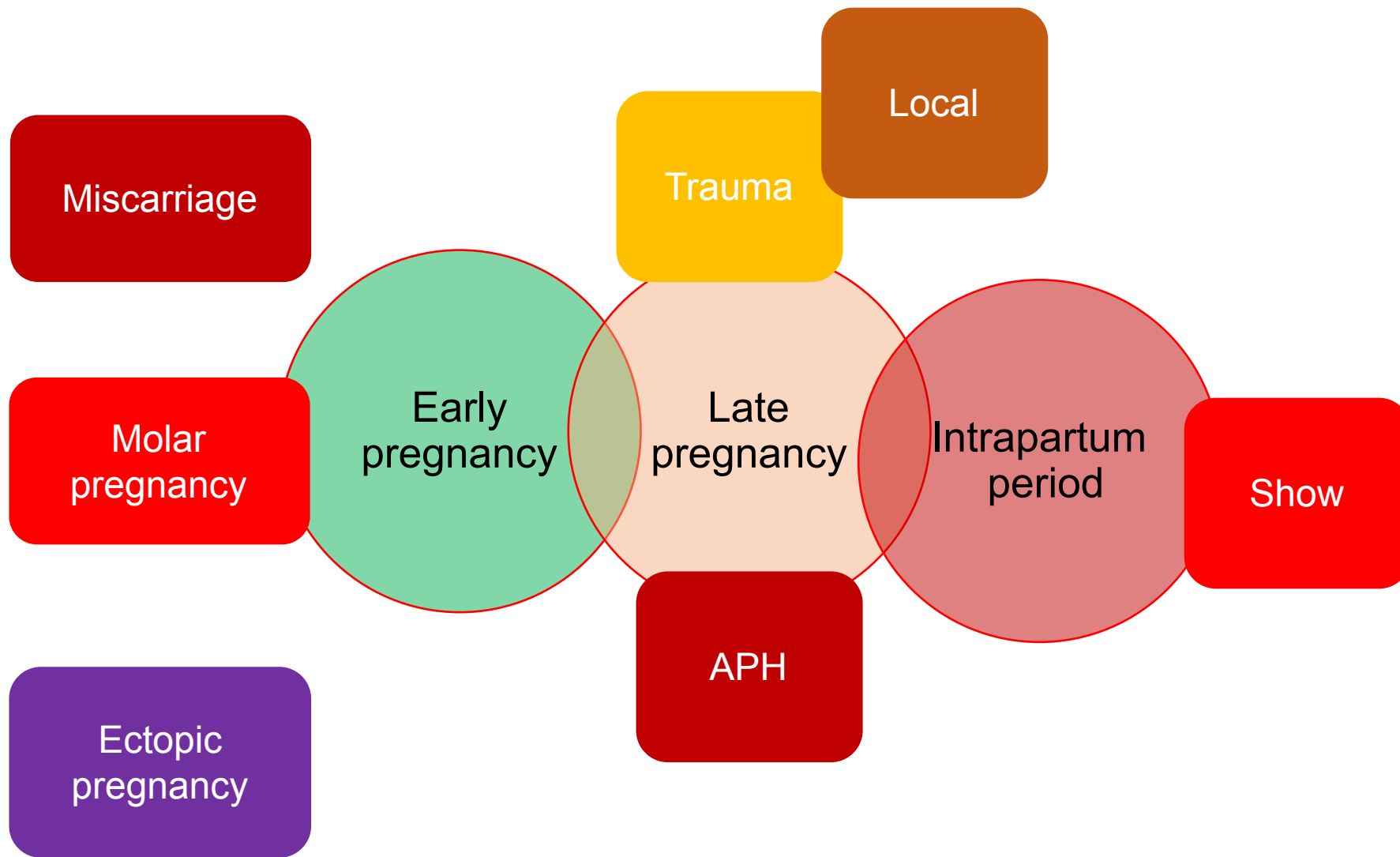


Antepartum haemorrhage

Dr.Sasirekha R

Obstetric haemorrhage





Antepartum haemorrhage (APH) is bleeding from the genital tract in pregnancy at ≥ 24 wks gestation before onset of labour.

24 or 28 weeks?

Causes –Antepartum haemorrhage

- Placenta praevia
 - Abruptio placenta
 - Vasa praevia
 - Uterine rupture
 - Bloody show
 - Cervical trauma
 - Cervical erosion/ Polyp/ Varicosity/ Cervicitis/ Malignancy
 - Unexplained – Indeterminate APH (Up to one third)
- 
- The diagram consists of a large blue bracket on the left side of the first three list items. To the right of the bracket is a dark blue rounded rectangle with the text 'Most common' in white.

Abruptio placenta

- Premature separation of normally situated placenta
- “Rending asunder of the placenta”
- Sudden trauma – blunt abdominal/ Sudden decompression of uterus
- Infection & Inflammation also contribute
- Hypertension
- Thrombophilia
- Folic acid deficiency
- Drug abuse/ Smoking
- Fibroid uterus

0.5-1% of all pregnancies

Grand multiparous &
advanced maternal
age

TABLE 41-4. Risk Factors for Placental Abruption

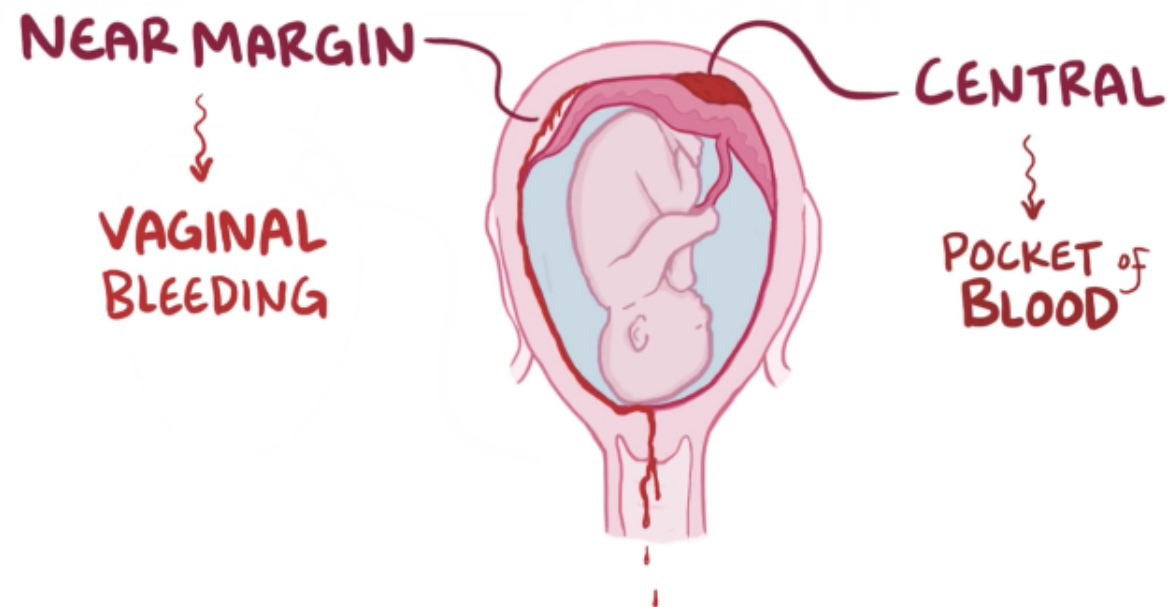
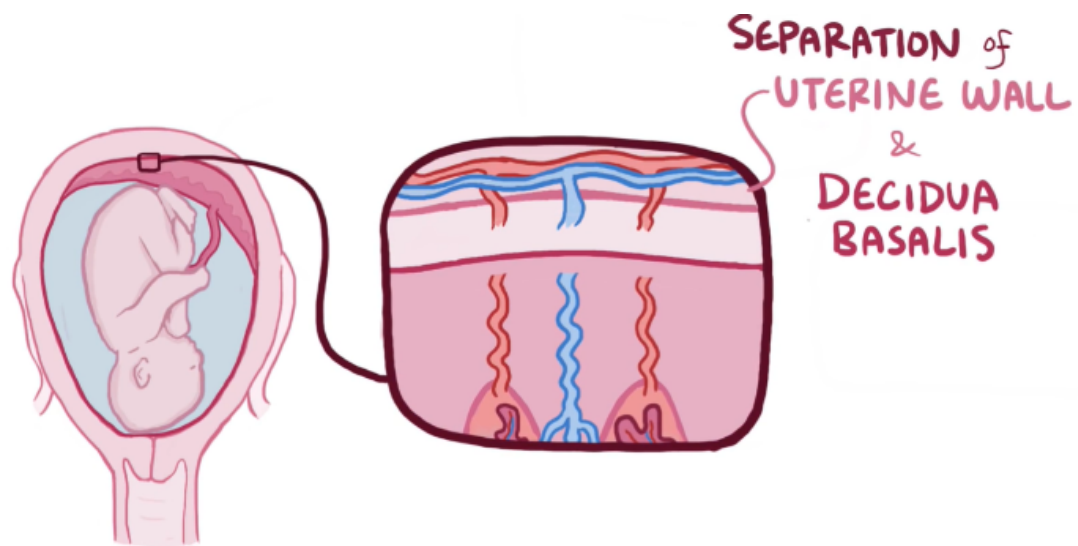
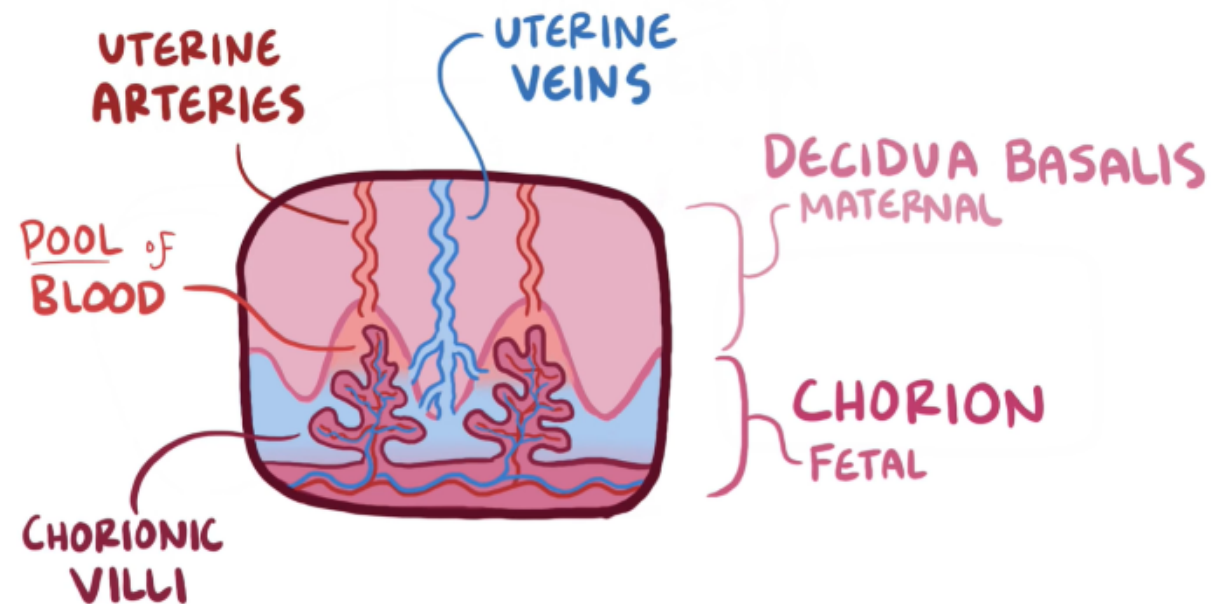
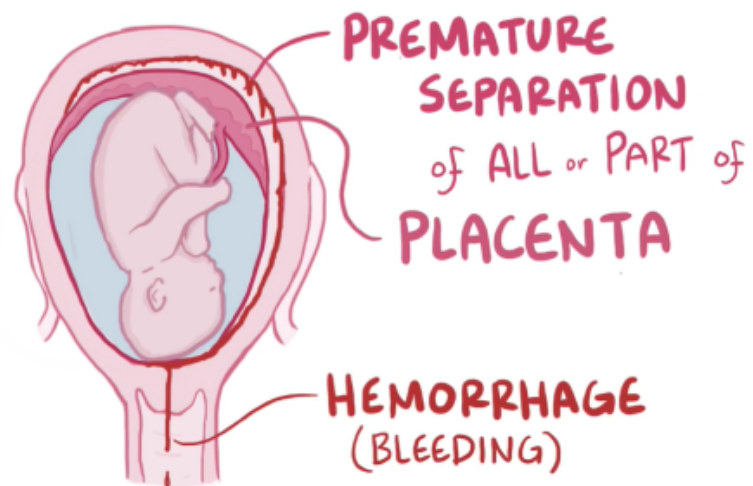
Risk Factor	Relative Risk
Prior abruption	10–188
Increased age and parity	1.3–2.3
Preeclampsia	2.1–4.0
Chronic hypertension	1.8–3.0
Chorioamnionitis	3.0
Preterm ruptured membranes	2.4–4.9
Multifetal gestation	2–8
Low birthweight	14.0
Hydramnios	2–8
Cigarette smoking	1.4–1.9
Single umbilical artery	3.4
Cocaine use	NA
Uterine leiomyoma	NA

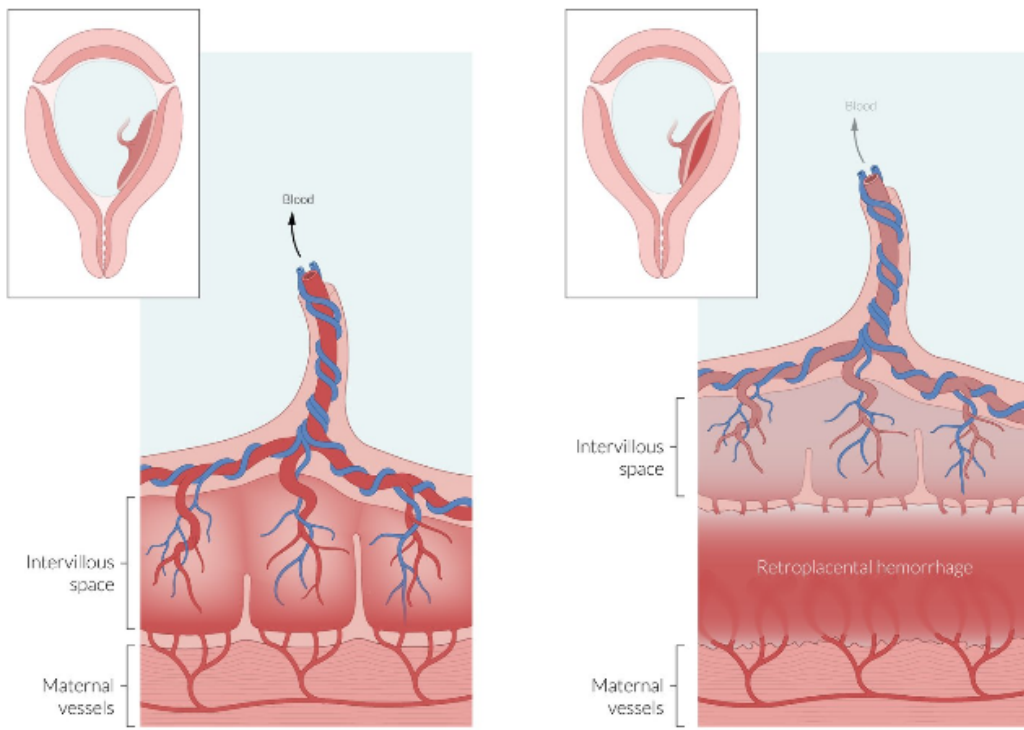
NA = not available.

Data from Ananth, 1999a,b, 2004, 2007; Aviram, 2015; Gutvirth, 2016; Morgan, 2016; Nath, 2007, 2008; Ruiter, 2015.

Previous abruption is severe
Previous two abruptions

PLACENTAL ABRUPTION





Rupture of decidual artery in basal plate



Retroplacental bleed

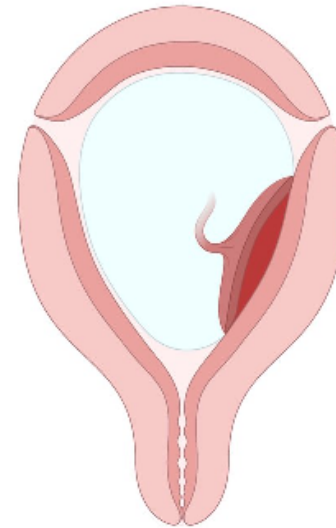


Seep between membrane & uterus

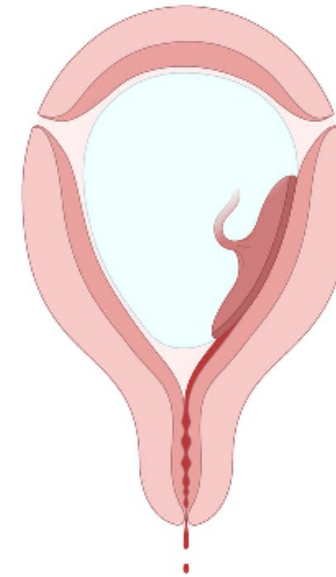


Expand & form large RPC

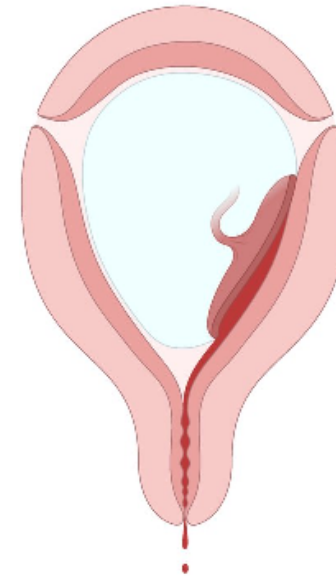
Types of placental abruption



Concealed hemorrhage
(retroplacental hemorrhage)



Revealed hemorrhage



Mixed hemorrhage

Examination

- Painful bleeding – Sudden onset ; Dark red colour
- Pain – severe in concealed variety
- Fetal movements may be reduced/ absent
- Often have history of hypertension
- Often in labour (50%)
- Uterus will be tender on palpation (Woody) / ↑ Basal tone
- SFH may be increased in concealed variety
- Maternal shock is not uncommon
- Rarely presents with signs of coagulopathy

- Obstetric emergency
- Admission
- Resuscitation & evaluation simultaneously

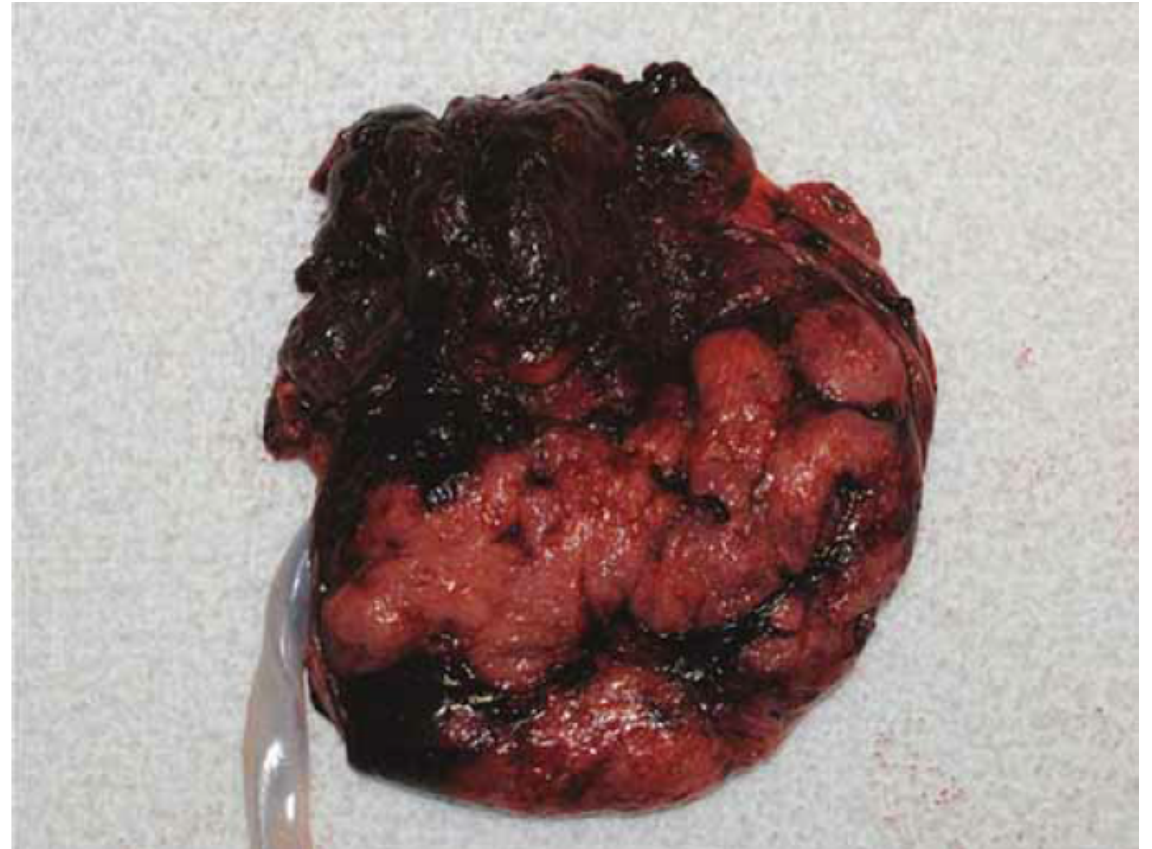
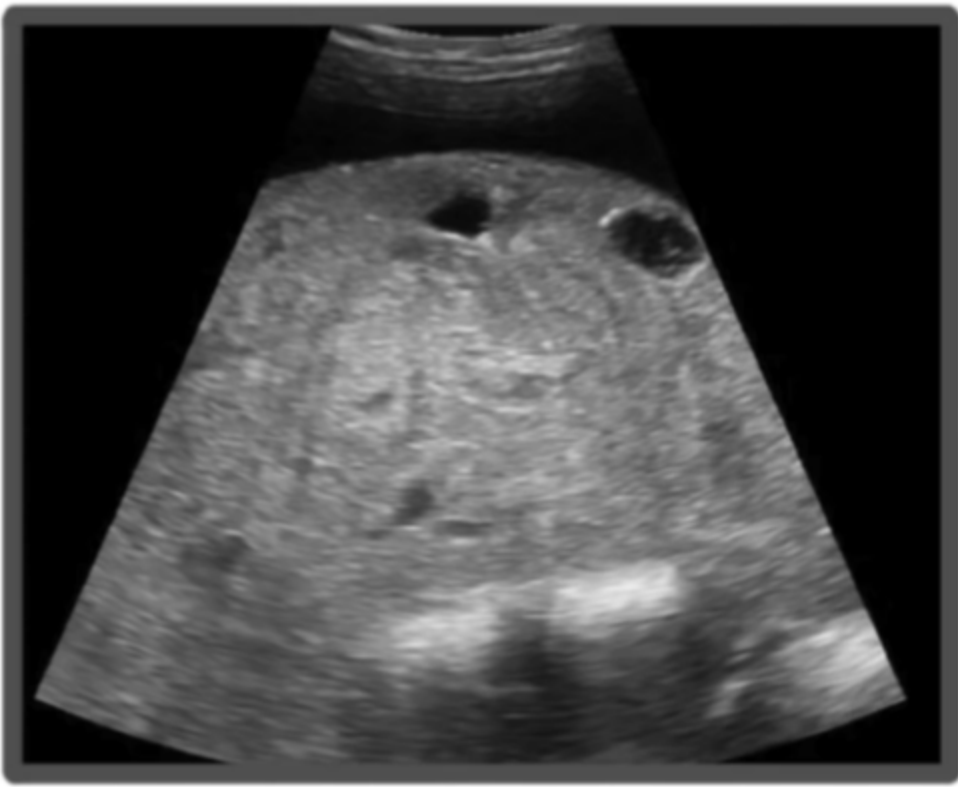
Delay □ increases the risk of maternal & fetal complications

USG is mainly for placental localization – To rule out placenta praevia

Severity of placental abruption

- Very difficult
- Fetal demise □ considered as severe but maternal complications can happen without fetal compromise
- Progression is often unpredictable
- Fetal tolerability depends on area placental damage
- Mostly it is acute ; Chronic abruption also can happen

Placental abruption – Clinical diagnosis



Differential diagnosis

- Severe variety □ Diagnosis is not difficult
- Milder variety □ Diagnosis by exclusion
- Labour pain/ placenta praevia in labour/ Rupture uterus/ Acute hydramnios
- USG □ mainly to rule out other causes
- Do speculum examination 24 after bleeding stops if cause is not established

Complications

Maternal

- Shock
- Coagulopathy – DIC
- AKI
- PPH
- Transfusion & its complications
- Death

Fetal

- Fetal distress
- Fetal demise
- Prematurity
- Chronic abruption □ FGR

Investigations

- Complete blood picture / Blood for cross matching
- Coagulation parameters –
FDP/d-dimer/Fibrinogen/aPTT/PT INR
- Renal function test
- Liver function test
- USG
- NST

Two wide bore
cannula if the
woman is in shock

Reserve blood &
components

It can be
massive!

Coagulopathy

- Disseminated intravascular coagulation
- Release of thromboplastin
- Initiates microvascular coagulation □ plasminogen to plasmin
- Depletion of coagulation factors & accumulation of fibrinolysins
- Severe PPH □ Depletion of coagulation factors □ Bleeding

Abruption is the most common
cause of DIC in obstetrics

Severe abruption the
fibrinogen is often <150mg%

Concealed abruption □ Increased uterine pressure forces thromboplastin onto maternal circulation

Couvellaire uterus

- Named after the person who described it
- Utero placental apoplexy
- Port wine colour
- Extensive uterine & extra uterine extravasation
- Often leads to uterine inertia
- Usually diagnosed on laparotomy
- But it contracts after delivery and respond to oxytocics – Not an indication for hysterectomy



It can extend onto broadligament, fallopian tubes, ovaries and to peritoneal cavity

End organ injury

- AKI
 - Hypovolemia
 - DIC
 - Hypertension
 - Pituitary apoplexy
- Vigorous fluid management & blood transfusion
 - Induction-delivery to be minimized
 - Renal injury –ATN- Usually reversible

Management

- Usually delivery is required unlike placenta praevia
 - Gestational age / fetal viability/cervical status/ complications at presentation helps to execute the management
 - Fetal condition is good and delivery is not imminent ☐ Caesarean delivery is preferred by most & is a wise decision
 - While awaiting vaginal delivery it is essential to replenish the lost volume and correct coagulopathy
- Early amniotomy has long been championed in the management of placental abruption
 - If the contractions are not efficient ☐ oxytocin can be started

Intensive resuscitation to correct both retro placental & vaginal bleeding

No tocolysis



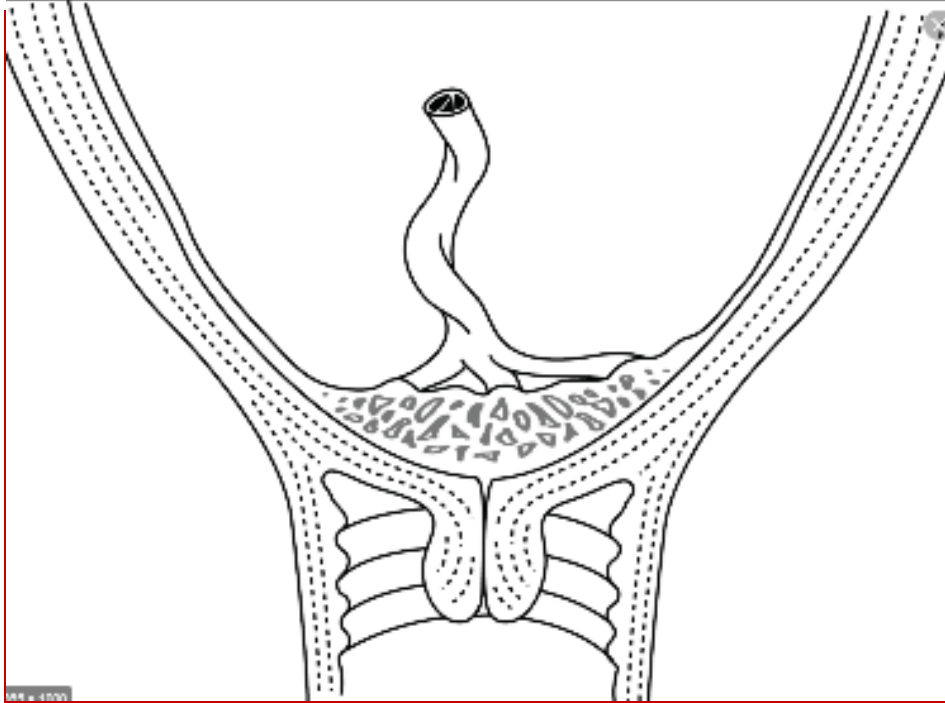
Oxytocin often may be needed

Induction-delivery interval $\square$ 6 hours (in the past) ; mother need to be stabilized during the waiting period

Recollect

- Placental abruption – Obstetric emergency
- Bleeding is often accidental & painful
- Can be associated with HTN
- Concealed variety – severe one
- Fetal distress /demise is common
- Delivery should be planned – No conservative management
- Shock, DIC & AKI □ common ; Death can occur
- Mode of delivery depends on condition of fetus/gestational age/cervical status

There may be a place for conservative management **but at a post graduate level!**



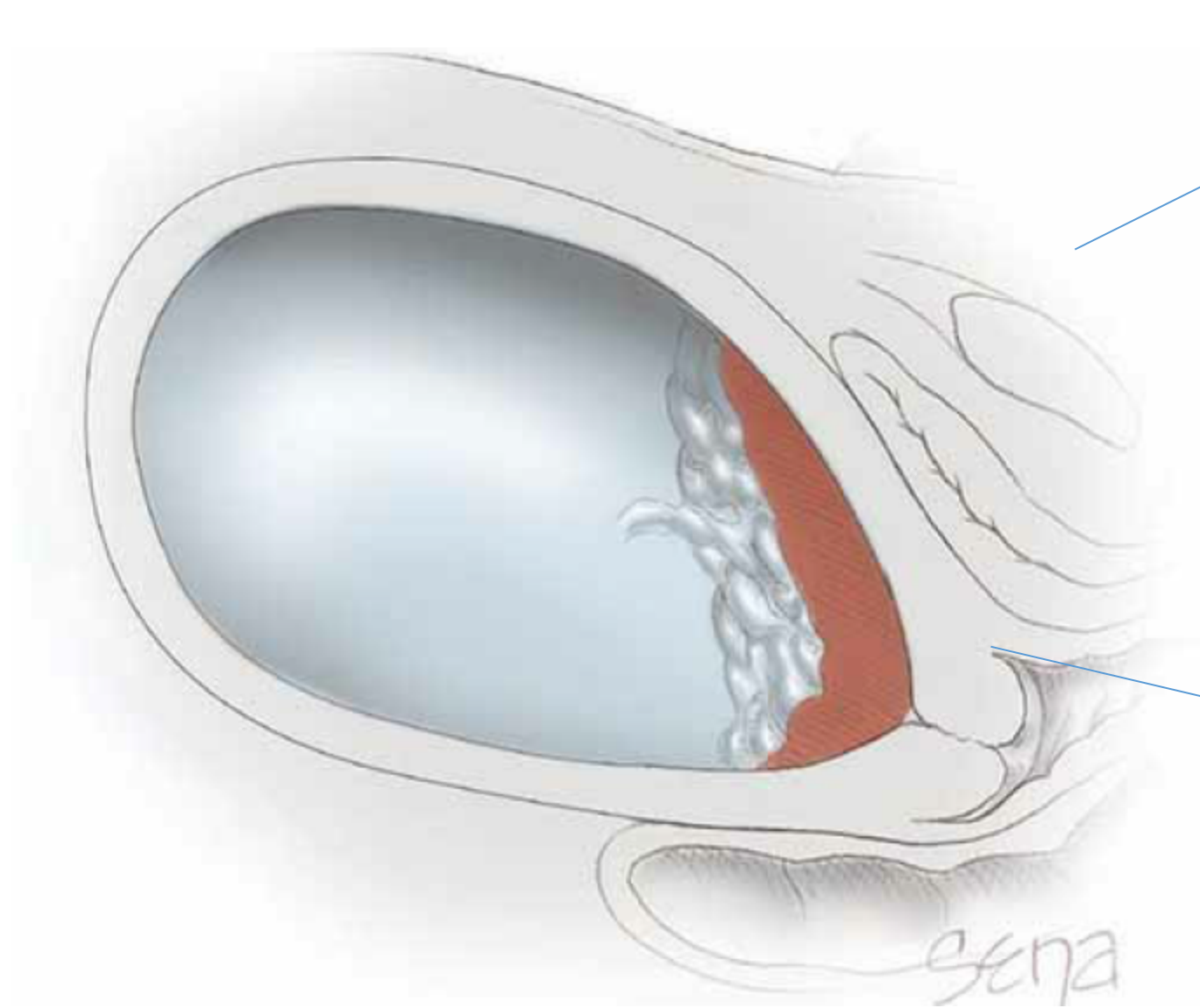
Placenta praevia

Placenta praevia (praevia means lying before)

- Placenta implanted in the lower uterine segment –abnormal
- Inevitable bleeding!
- Four different types
- Major (Type III & IV) & Minor (Type I & II)
- Type II □a & b (dangerous placenta praevia)
- Lowlying placenta
- Migration of placenta □Usually happens (Misnomer)
- Drop down of placenta □Rarely happens

Type I – marginal placenta praevia <2cm from IO

0.5% of all pregnancies



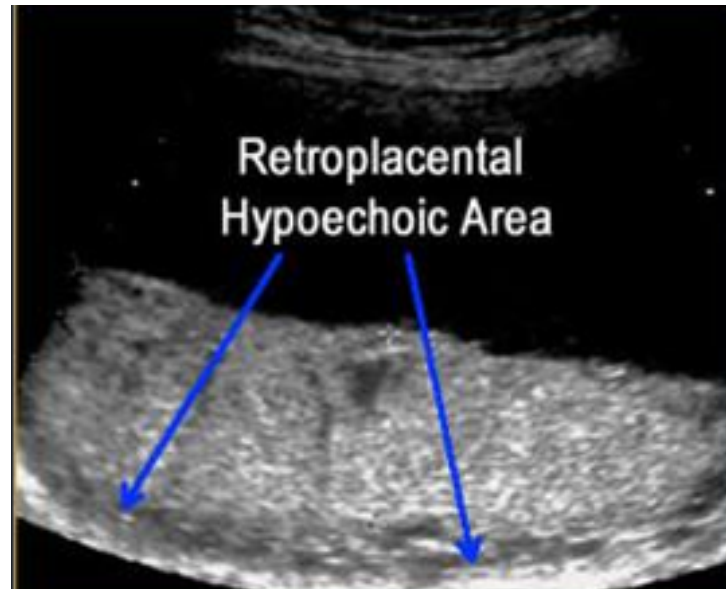
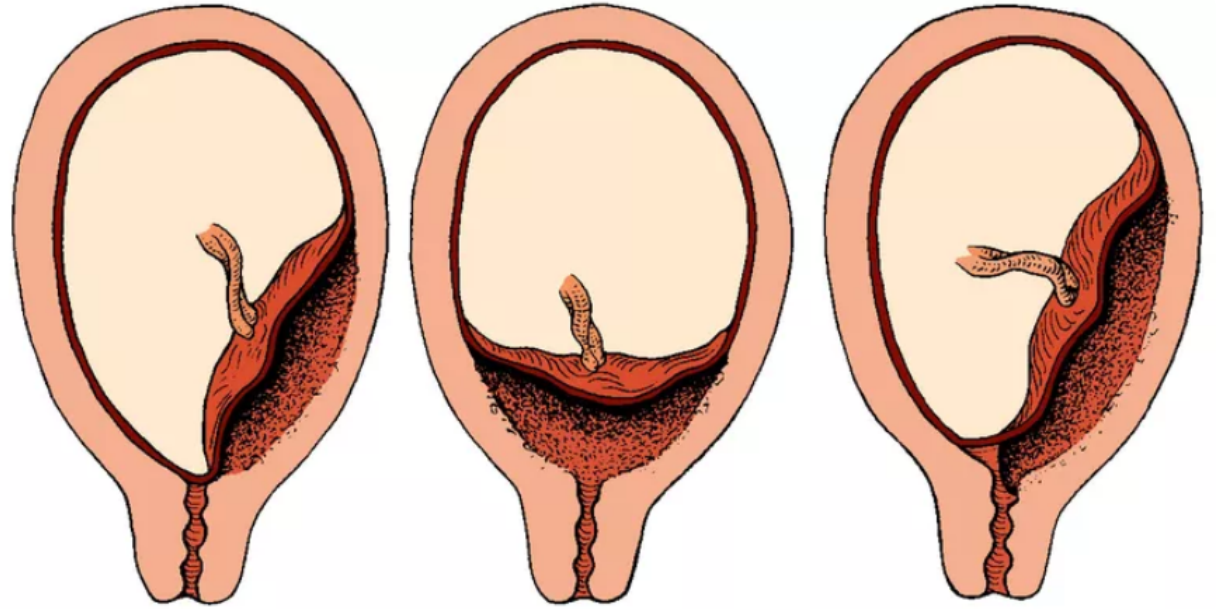
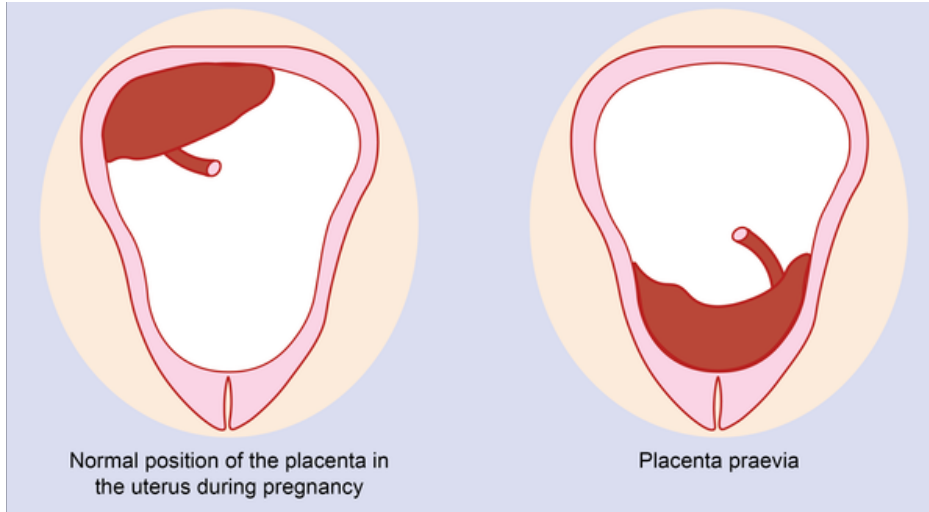
Source of
bleeding is
maternal

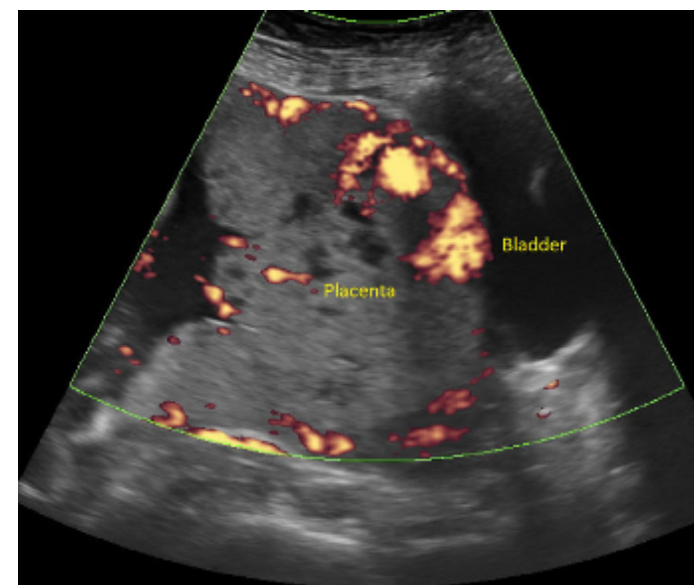
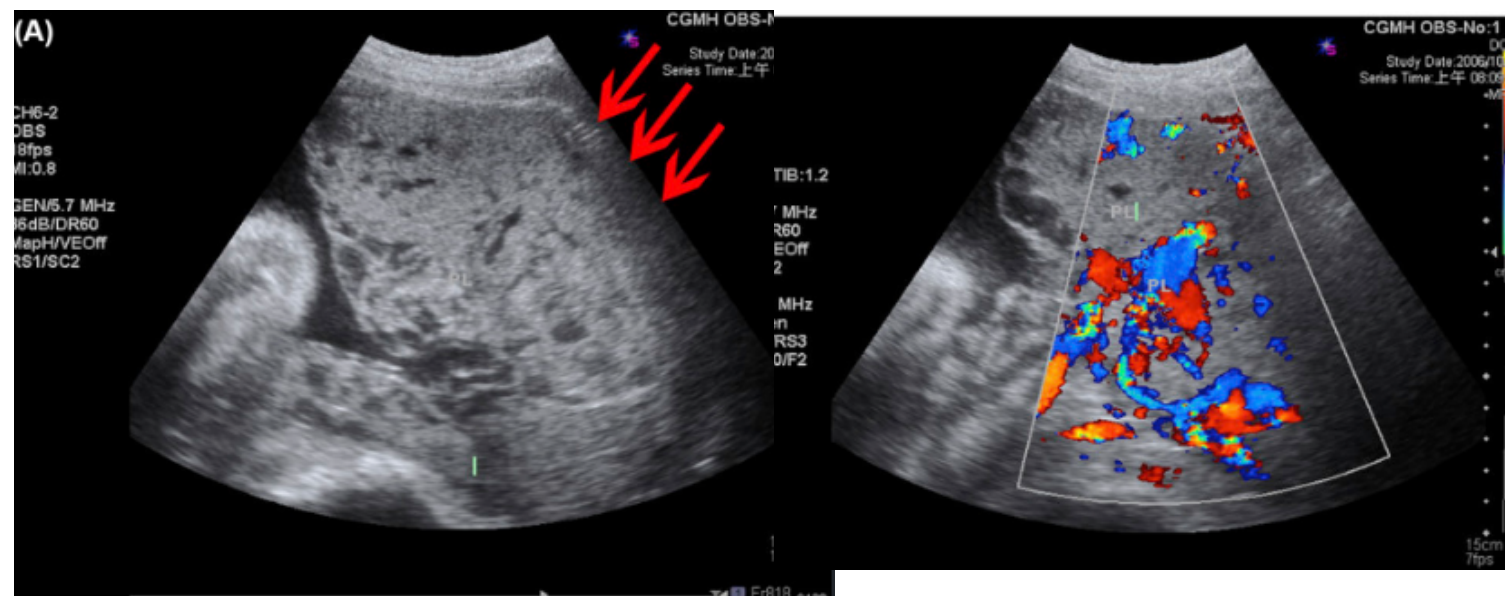
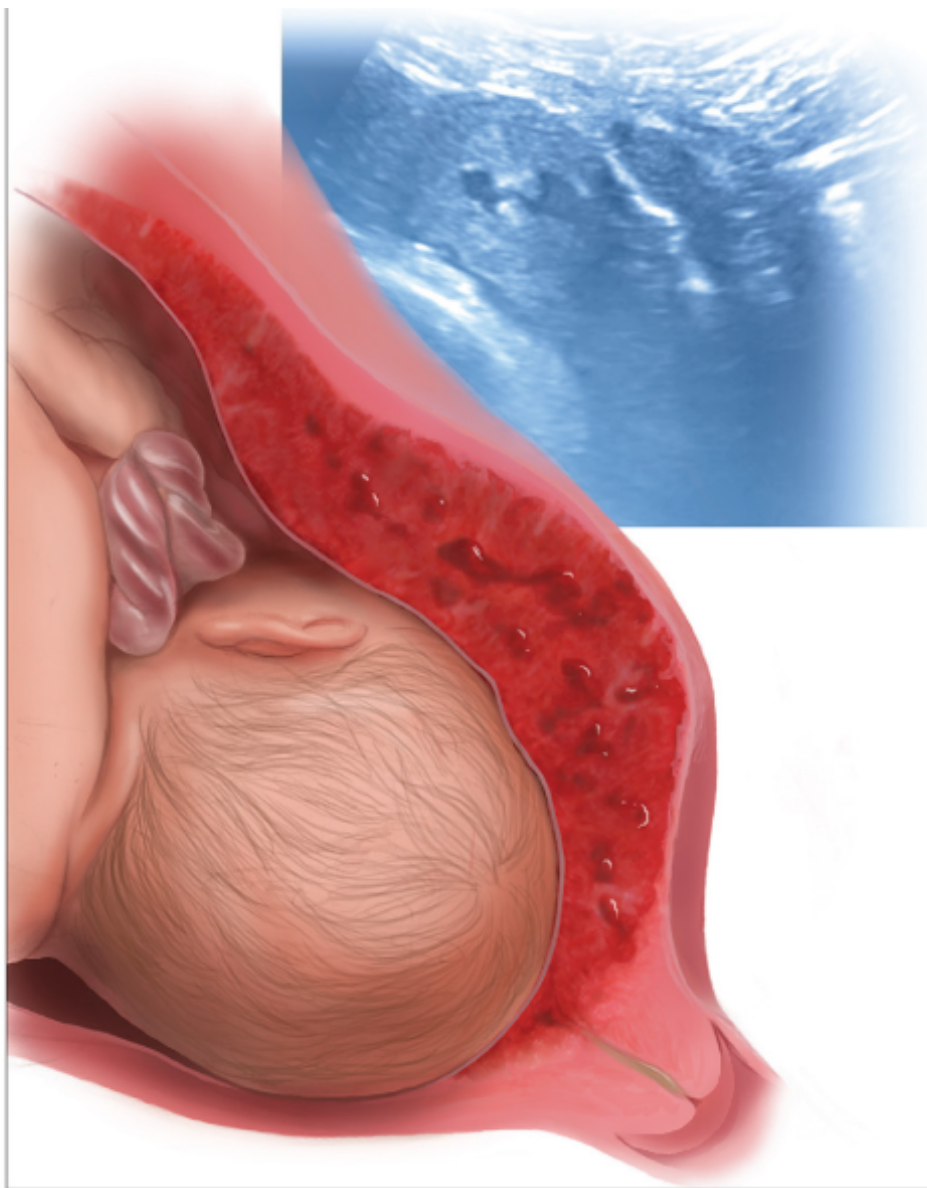
Almost always
revealed

Risk factors

- Increased maternal age
- Grand multiparity
- Smoking
- Fibroid uterus – submucous
- Multiple pregnancy
- Previous uterine surgery
- ART pregnancy

Previous uterine surgery increases
the risk of MAP
(morbidly adherent placenta)



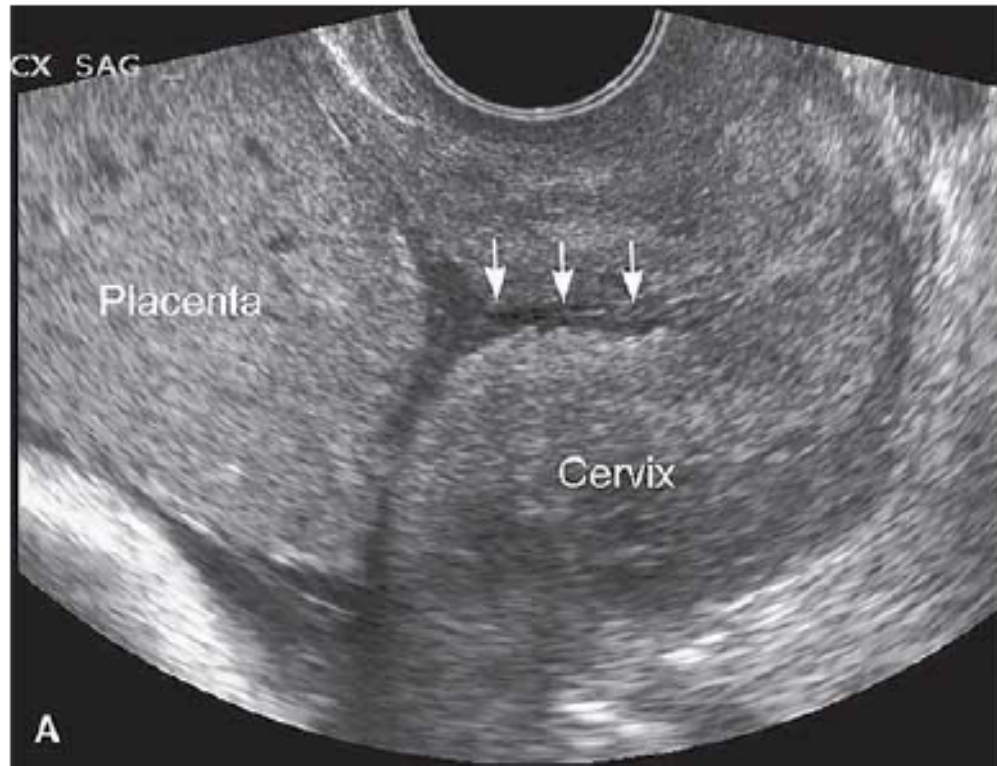


Presentation

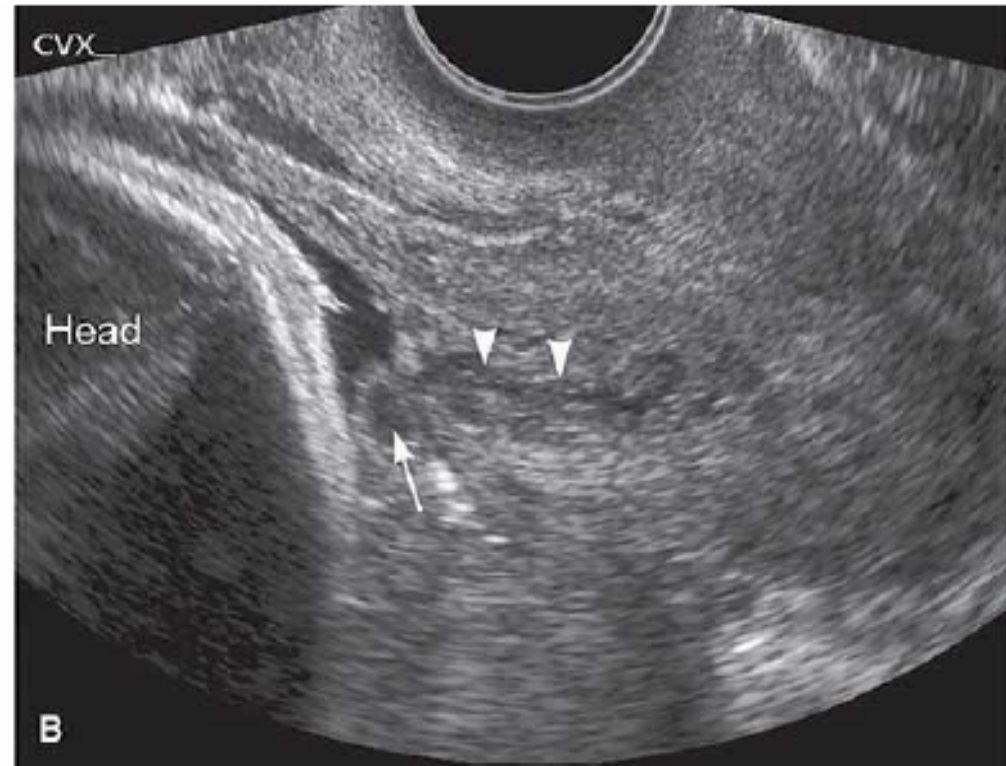
- Usually painless bleeding – often bright red
- Initial episode – often regresses – sentinel bleeding
- There is a place for expectant management!
- Bleeding in placenta praevia □ Inevitable as the lower segment differentiates
- If placenta praevia doesn't bleed □ suspect adherent placenta (MAP)
- Bleeding is always revealed!

Diagnosis

- Quick clinical examination
- Rule out abruptio placenta
- USG – simple non invasive
- Defer digital examination till placenta praevia is ruled out
- Double set up – in the past □ requirement is almost NIL
- USG – TAS/TVS helpful in almost all the situations
- Adherent placenta □ USG /Doppler; doubtful cases MRI



Type III



Posterior (Type IIb)

Management

- Quick history
- Bedside USG –localize / Type
- Assess the degree of bleeding
- Unlike abruptio placenta □ Coagulopathy/AKI are rare
- Hypovolemic shock can occur
- Assess fetal condition
- Arrange blood & Transfuse if needed

Generally maternal outcome is good

Fetal □ prematurity is the concern

Rarely Still birth /FGR

Reduce anxiety

Gestational
age

Management

Labour

Degree of
bleeding

Expectant management (Mcafee)

- Before 36-37 weeks
- Fetal condition is reassuring
- Maternal condition is stable
- Hb >10gm% / reserve blood

Rh negative □ Anti D

Delivery

- Depends on type
- Type I & II a □ vaginal delivery can be allowed
- Type Iib, Type III and IV □ caesarean delivery
- Caesarean challenging □ Vascular lower segment / Bleeding
- May need to cut through the placenta
- PPH □ oxytocics / Surgical management
- Adherent placenta □ Elective caesarean hysterectomy / No attempt to separate placenta

Other causes

- Vasa praevia
- Uterine rupture
- Bloody show
- Cervical trauma
- Cervical erosion/ Polyp/ Varicosity/ Cervicitis/ Malignancy
- Unexplained – Indeterminate APH (Up to one third)

Assessment – Quick evaluation

History:

- Onset
- Predisposing event
- Gestational age
- Fetal movement
- Pain
- Leaking PV
- Previous history
- Obstetric history
- Hypertension
- Placental position
- Blood G&T

General examination

Vitals : PR/BP/Signs of Shock

Obstetric examination

Before vaginal examination – Placenta praevia to be ruled OUT!

Large antepartum haemorrhage

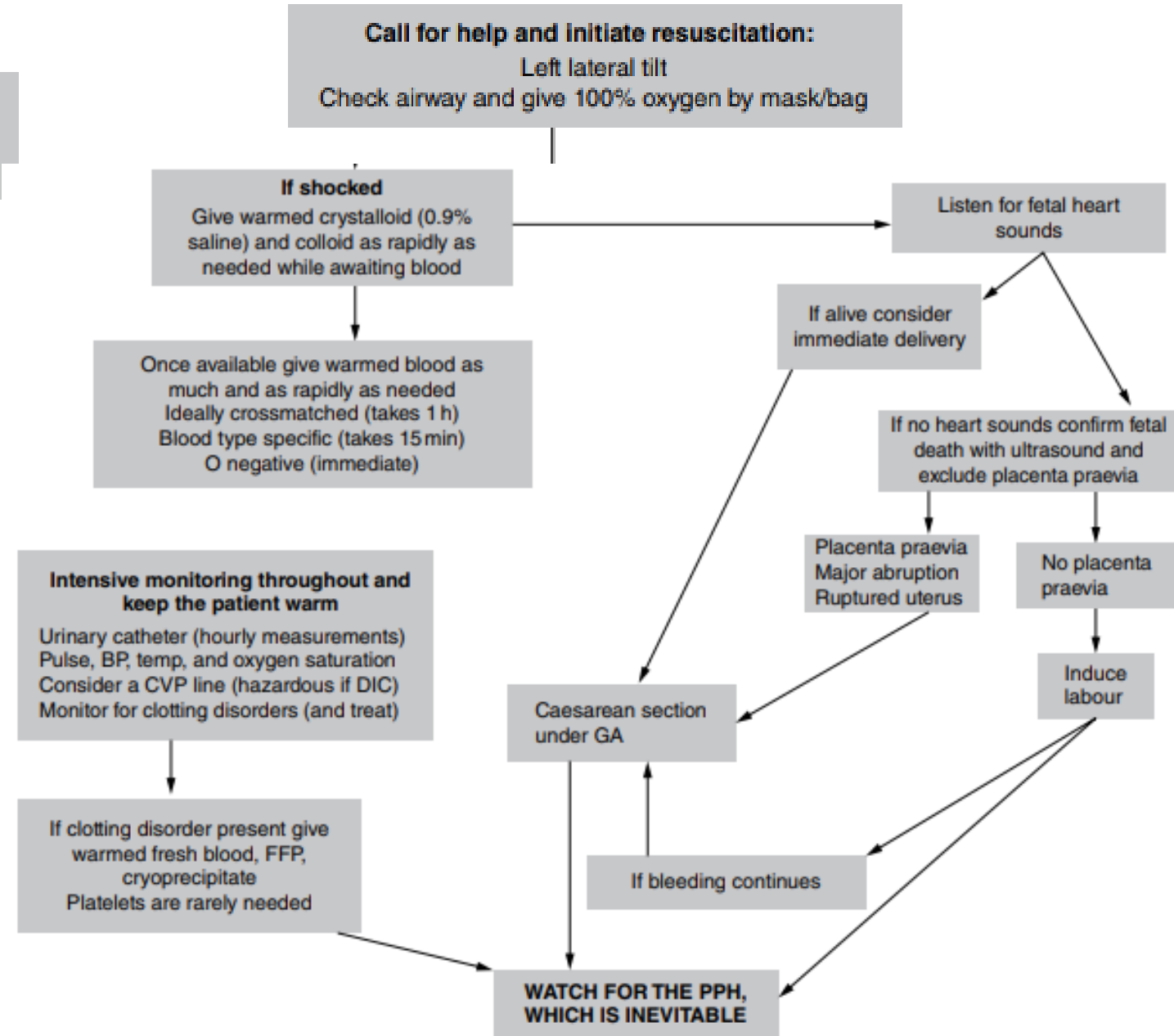
Pallor, tachycardia, shock

Pain may be absent

Bleeding may be concealed

Concealed bleeding (placental abruption or intra-abdominal bleed) is painful, while revealed bleeding from placenta praevia, cervix or lower genital tract can be painless

Pathway of care



Condition	Placental abruption	Placenta praevia
Onset	Sudden Occurs most often in the third trimester	Sudden Prior to rupture of membranes
Pain	Usually mild to moderate abdominal pain Uterine tenderness	Painless
Additional symptoms	Continuous, dark, vaginal bleeding Hypertonic contractions(woody uterus)/ Uterine tenderness Premature labor / Fetal distress	Bright red vaginal bleeding
Risk factors	Previous placental abruption / Hypertension Trauma / Smoking /Cocaine use Preterm premature rupture of the membranes	Previous placenta previa/ cesarean delivery Multiple gestation Advanced maternal age /Smoking
Complications	Shock/ AKI/ Coagulopathy/PPH/ Death Fetal distress /Demise	Shock/PPH
Management	Usually delivery – Mostly vaginal / Caesarean delivery in selective cases	Expectant management Minor PP – vaginal / Major PP – Caesarean delivery

Questions?