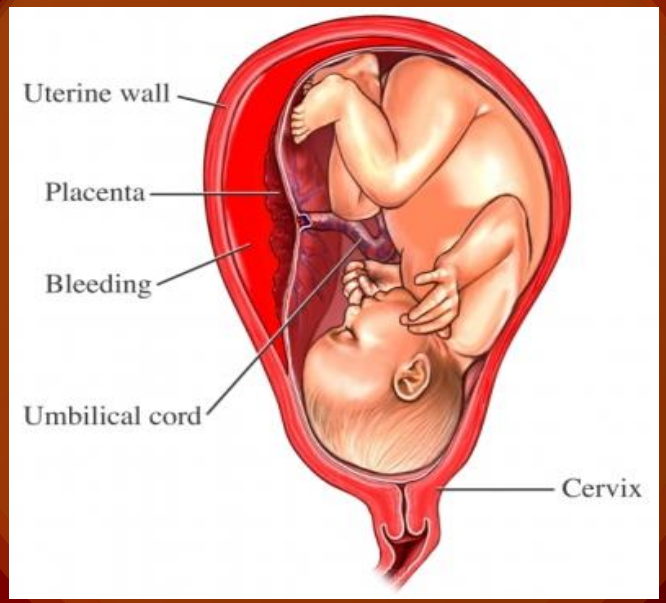


ANTEPARTUM HEMORRHAGE

Assistant prof. Dr.Nabila K. Yaqoub

Antepartum bleeding

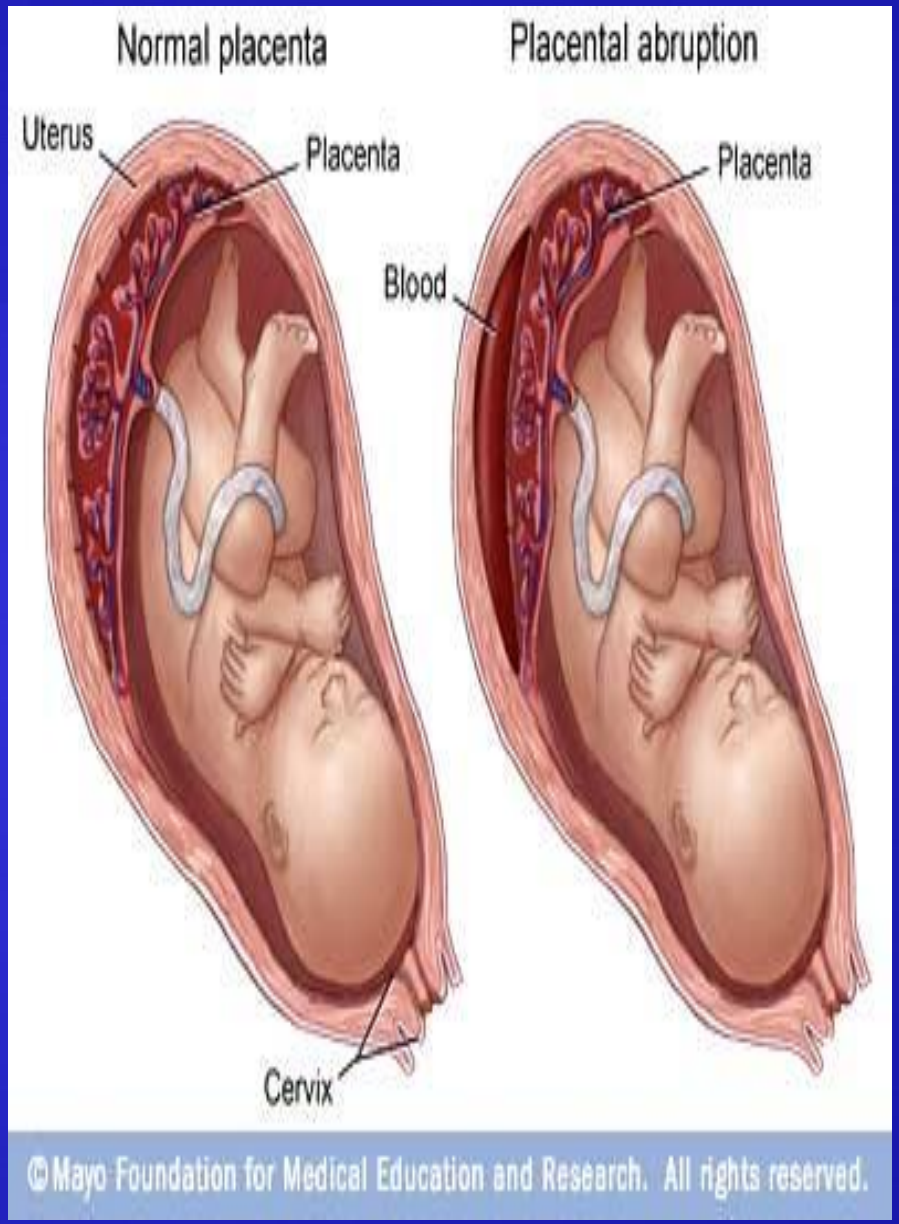
- Placenta previa
- Abruptio placenta
- Vasa previa

Consequence

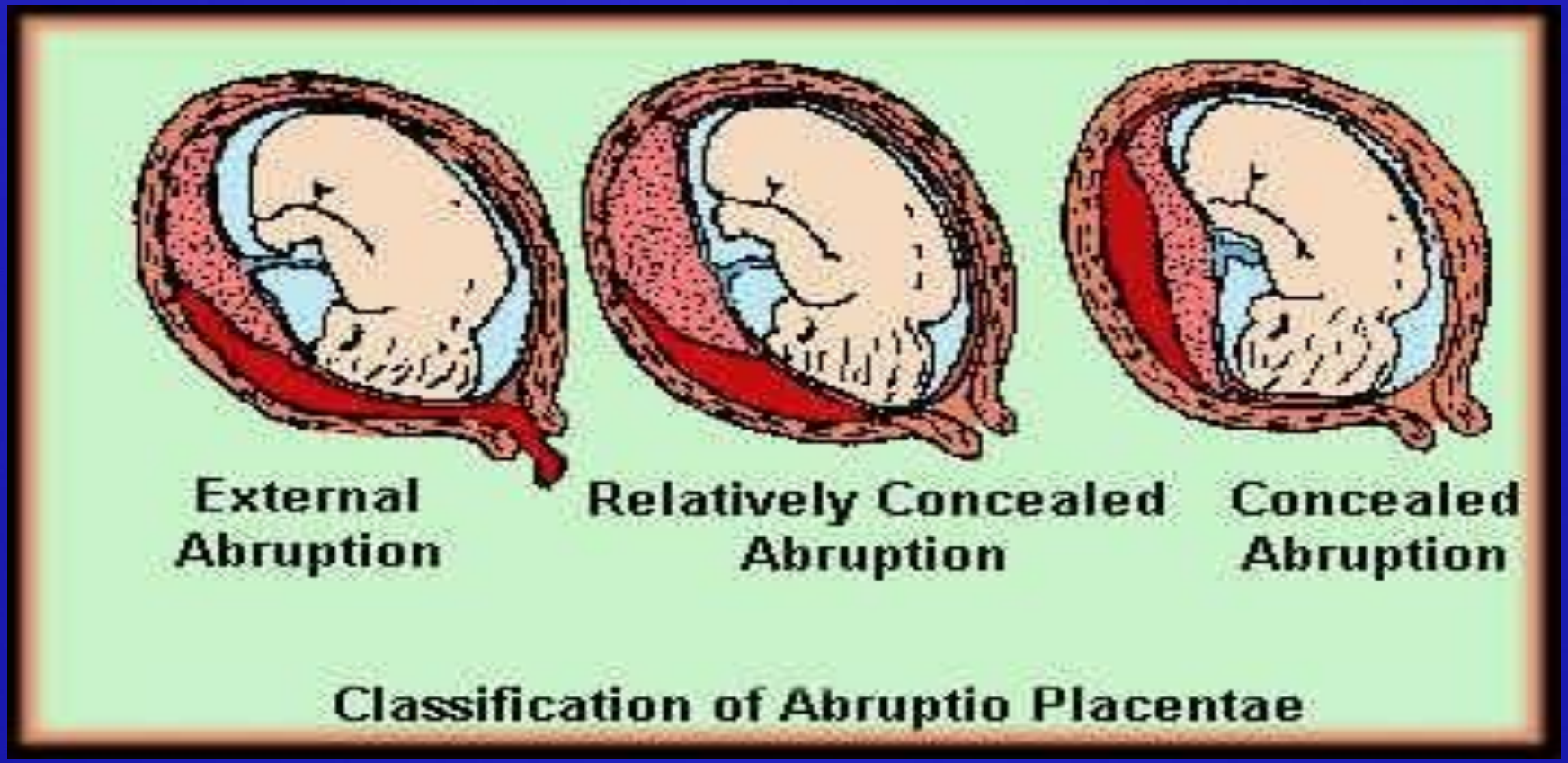
- Increased risk for poor pregnancy outcome *

PLACENTAL ABRUPTION

PLACENTAL SEPARATION FROM ITS NORMAL IMPLANTATION SITE BEFORE DELIVERY



EXTERNAL OR CONCEALED BLEEDING




A large retroplacental blood clot is known as
abruptio placenta.

Significance and Frequency

- 1 in 200
- Frequency of abruption causing fetal death has declined since 1970's in the US :

  decreased high parity pregnancies

  availability of prenatal care

  improved emergency transformation

Perinatal Morbidity and Mortality

- Prominent role in stillbirth*
- High perinatal mortality rate in abruption:
  - abruption
  - associated preterm labor
  - fetal-growth restriction
- Increased serious adverse effects on infant survivors
  - neurologic deficits, palsy

Etiology

- THE PRIMARY CAUSE IS LARGELY UNKNOWN BUT PLACENTAL ABRUPTION HAS SEVERAL ASSOCIATED CAONDITIONS

Risk factors

- Increased age and parity
- Race
- Familial
- Hypertension (preeclampsia, CHVD)
- Prematurely ruptured membranes

Risk factors

- Smoking
- Cocaine
- Thrombophilias
- Trauma
- Leiomyomas

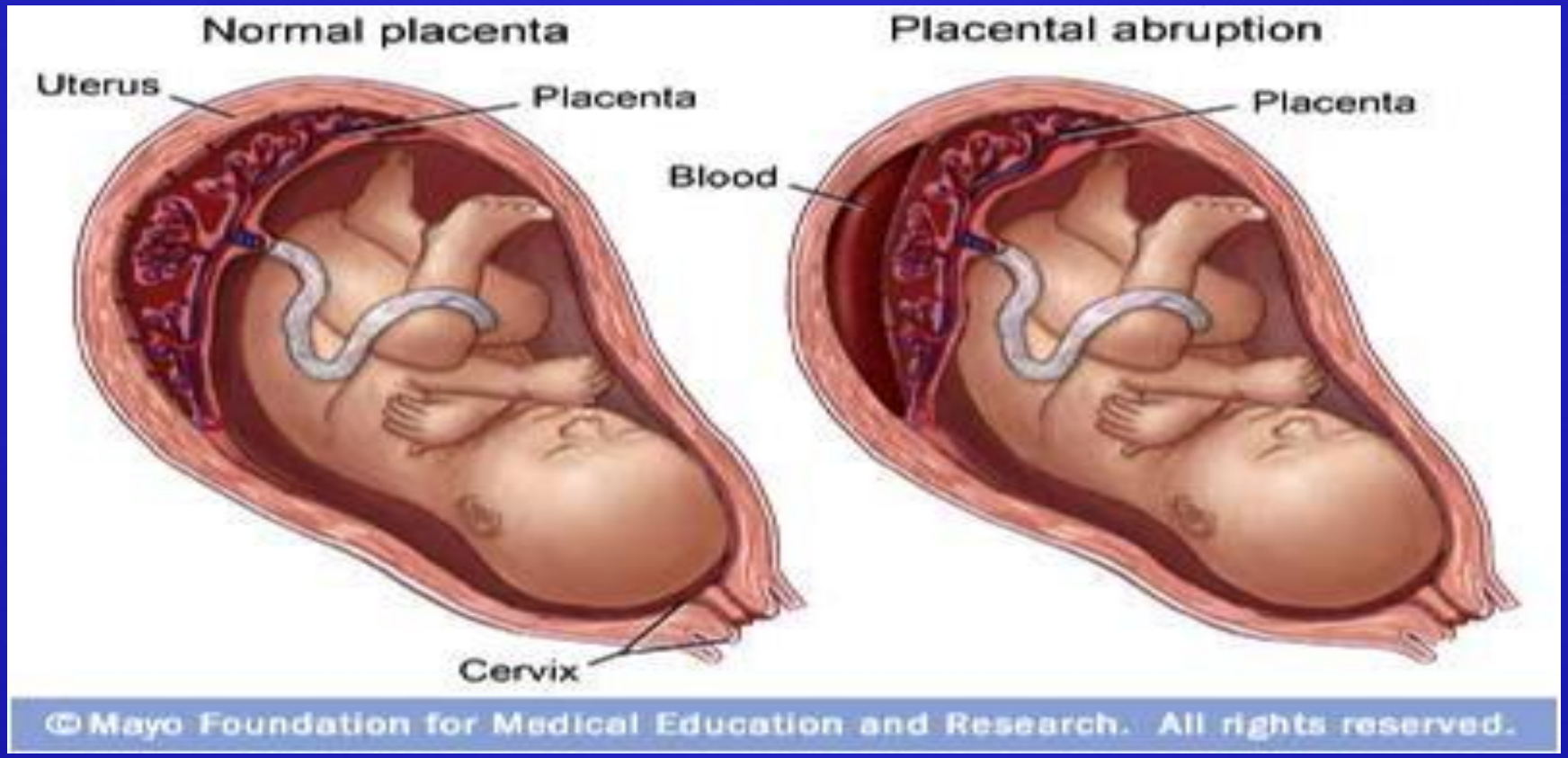
Recurrence

- Recurrence rate is high and may occur earlier in the subsequent pregnancy

Pathology

Decidual hematoma

Concealed hemorrhage



Concealed hemorrhage

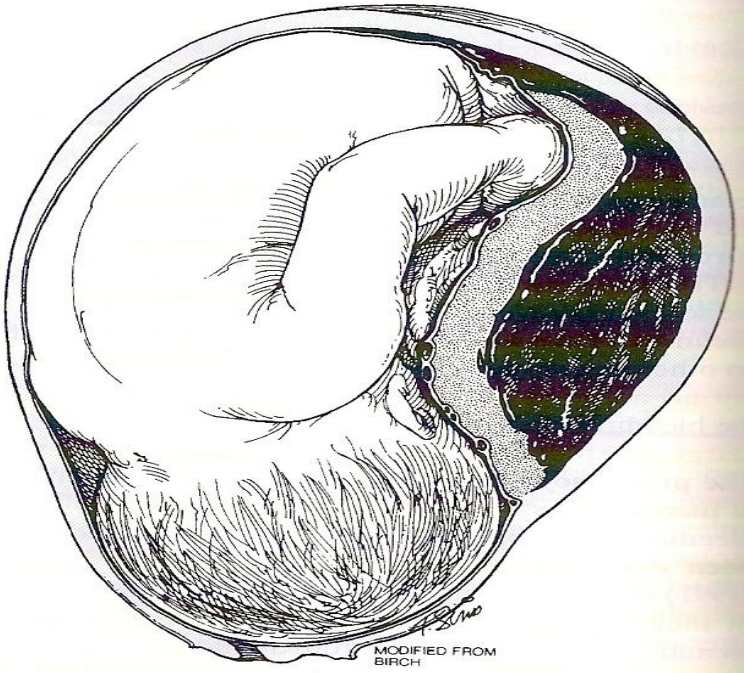


FIGURE 25–2. Total placental abruption with concealed hemorrhage. The fetus is now dead.

Chronic placental abruption

- minority of cases→ the retroplacental hematoma is somehow arrested completely without delivery
- Some cases occur remote from term or very early in gestation

Fetal-to-maternal hemorrhage

- Occurs in minority of cases since most bleeding in abruption is MATERNAL
- Much more likely in traumatic abruption*

Clinical diagnosis

- Vaginal bleeding
- Uterine tenderness or back pain
- Fetal distress
- High frequency contractions
- Hypertonus
- Idiopathic preterm labor
- Dead fetus

Role of Sonography

- Not usually helpful in confirming diagnosis*
- Negative finding DOES NOT exclude abruption

Differential Diagnosis

- Diagnosis is straightforward in most severe cases
- NO Lab tests or diagnostic methods available for accurate detection of lesser degrees of separation
- Diagnosis by exclusion in milder cases by clinical and sonographic evaluation:

  placenta previa

  other causes of bleeding

Differential diagnosis

- Placenta previa
- Labor accompanying previa
- Labor pains
- Uterine rupture
- Abdominal pregnancy with intraabdominal hemorrhage
- Hepatic rupture
- Uterine vein and spleenic artery rupture
- Sickle cell crisis

	ABRUPTIO PLACENTA	PLACENTA PREVIA
History	Frequent association of pre-eclampsia or hypertension from any cause	No association with pre-eclampsia
	A single attack of vaginal bleeding, which usually continues until delivery	Repeated "warning" hemorrhages, often occuring over a period of weeks
	Abdominal pain	Usually no abdominal pain
Abdominal examination	Local uterine tenderness, hypertonic "woody" uterus in a concealed abruption	Normal uterine tone & usually no tenderness
	Patient usually in labor	Patient rarely in labor
	Presenting part often engaged	Presenting part above brim, malpresentation frequently found
	Fetal parts may be difficult to palpate	Fetal parts usually palpable
	Fetal heart tones often absent	Fetal heart tones usually present
Ancillary aids	Placenta demonstrated in upper uterine segment by utrasound	Placenta demonstrated in lower uterine segment by ultrasound
Vaginal examination	Double set-up reveals no placenta within 5 cm. of internal os	Double setup reveals placenta implanted in lower uterine segment
Management	No place for expectant treatment when this diagnosis is made	If bleeding stops and fetus is less than 36 wks. old, expectant treatment may be indicated

Shock

- Hypovolemic
- Hypotension or anemia may not be present even with extreme concealed hemorrhage
- Oliguria*

Consumptive Coagulopathy

- Abruption is one of the most common obstetric causes
- Significant hypofibrinogemia plus elevated fibrinogen-fibrin degradation products and variable decrease in other coagulation factors
- More likely with concealed abruption

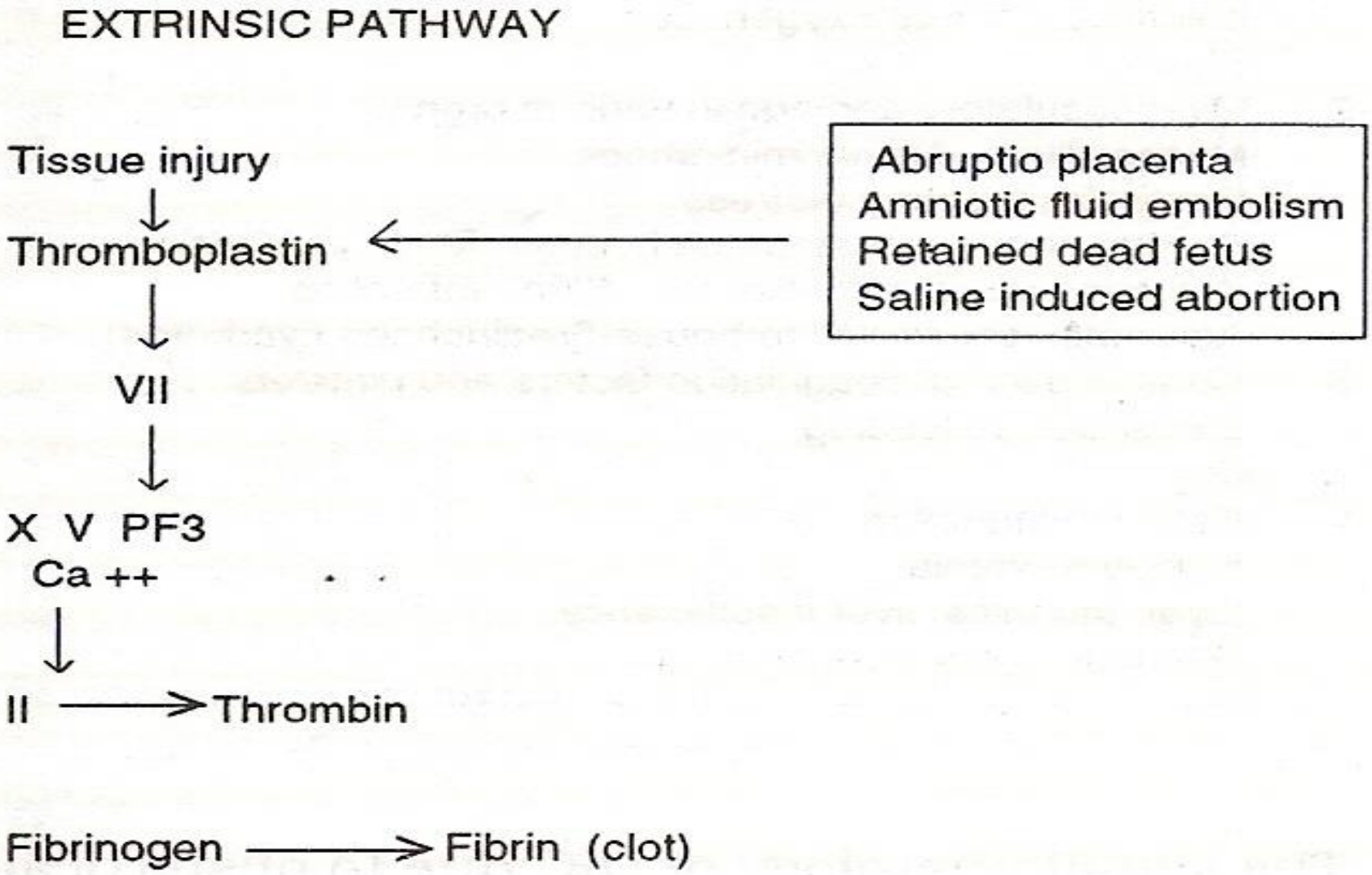


FIGURE 34.3. Initiation of DIC by entry of procoagulant material in the circulation through the extrinsic pathway.

Renal Failure

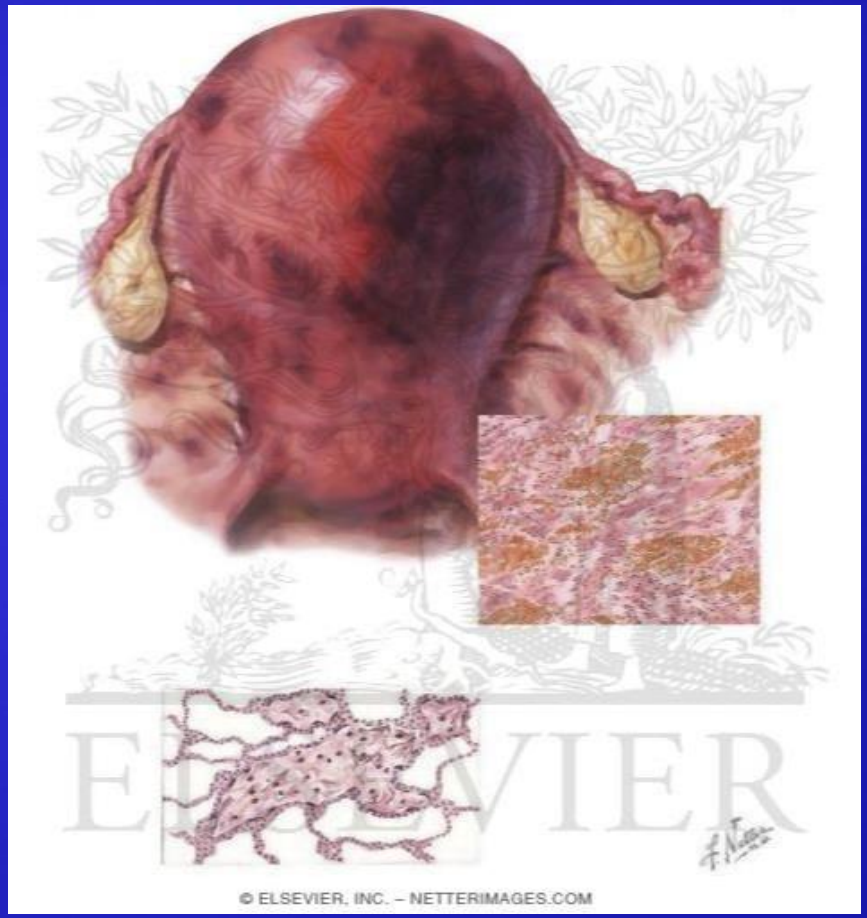
- Acute RF is more common if transfusion is delayed or incomplete
- Most cases are reversible

Sheehan Syndrome

- A rare condition following severe intrapartum or early postpartum hemorrhage
- Failure of lactation, breast atrophy, pubic and axillary hair loss, hypothyroidism, adrenal cortical deficiency
- Anterior pituitary necrosis

Couvelaire Uterus

- Uteroplacental apoplexy
- Bluish to purplish discoloration of the uterus
- Blood infiltrates serosal layer
- Rarely interferes with uterine contraction
- Not an indication for hysterectomy



MANAGEMENT

- DEPENDS ON GESTATIONAL AGE AND FETOMATERNAL STATUS
- Emergency CS: viable fetus + non imminent vaginal delivery
- Intensive resuscitation with blood and crystalloid: massive internal bleeding and prompt delivery

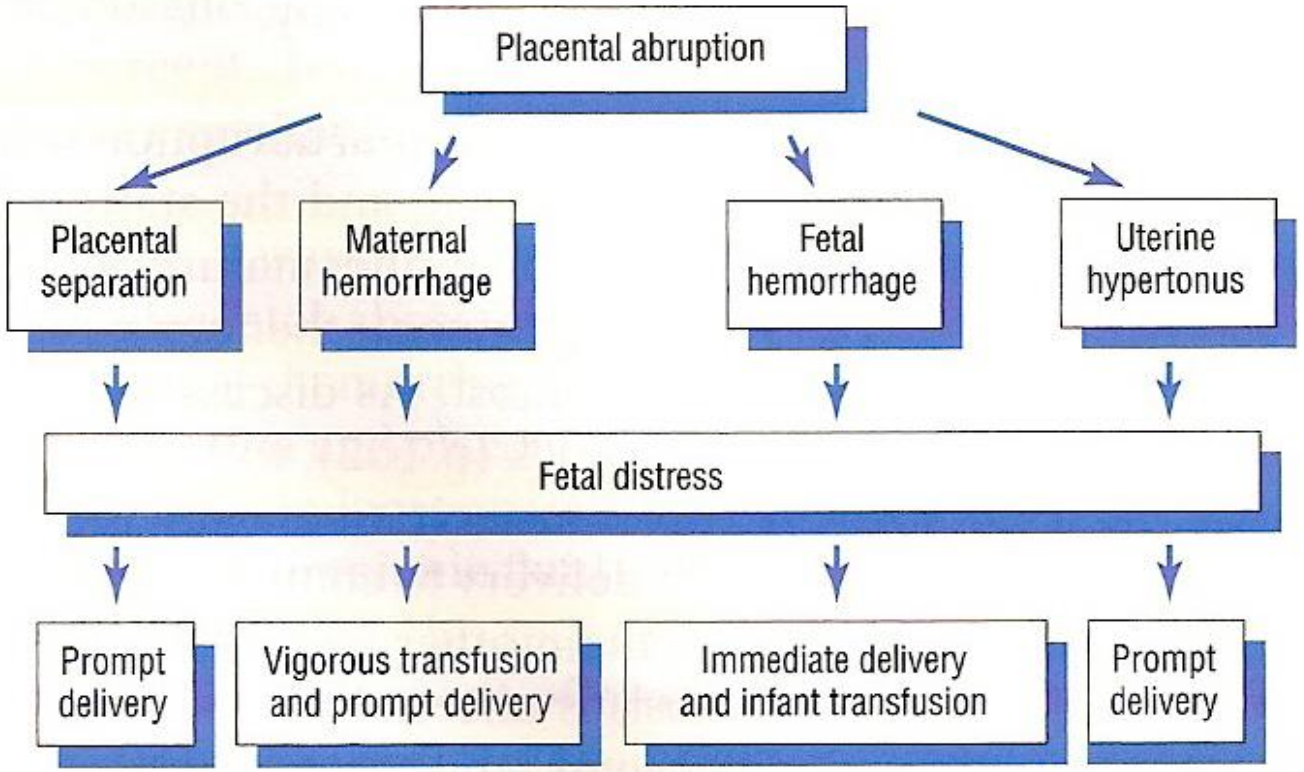


FIGURE 25–6. Various causes of fetal distress from placental abruption and their treatment.

EXPECTANT MANAGEMENT

- May be beneficial in immature fetuses in the absence of fetomaternal compromise
- Abruption developing very early in gestation often develop oligohydramnios
- Absence of ominous decelerations do not necessarily mean that the intrauterine environment is safe*
- Immediate correction of maternal volume deficits→ maintains function of part of placenta still implanted

Tocolysis

- Clinically evident abruption is a contraindication to tocolysis

Cesarean Delivery

- For rapid delivery of a live fetus in distress
- May be hazardous if the fetus is dead and the mother has severe consumptive coagulopathy

Vaginal Delivery

- Preferred in severe abruption with fetal death
- EXCEPTIONS:

  brisk maternal hemorrhage

  obstetrical indications that prevent vaginal delivery

Amniotomy

- May hasten delivery of fetus is reasonably mature
- In cases of immature fetuses, intact sac maybe a more efficient cervical dilator

Oxytocin

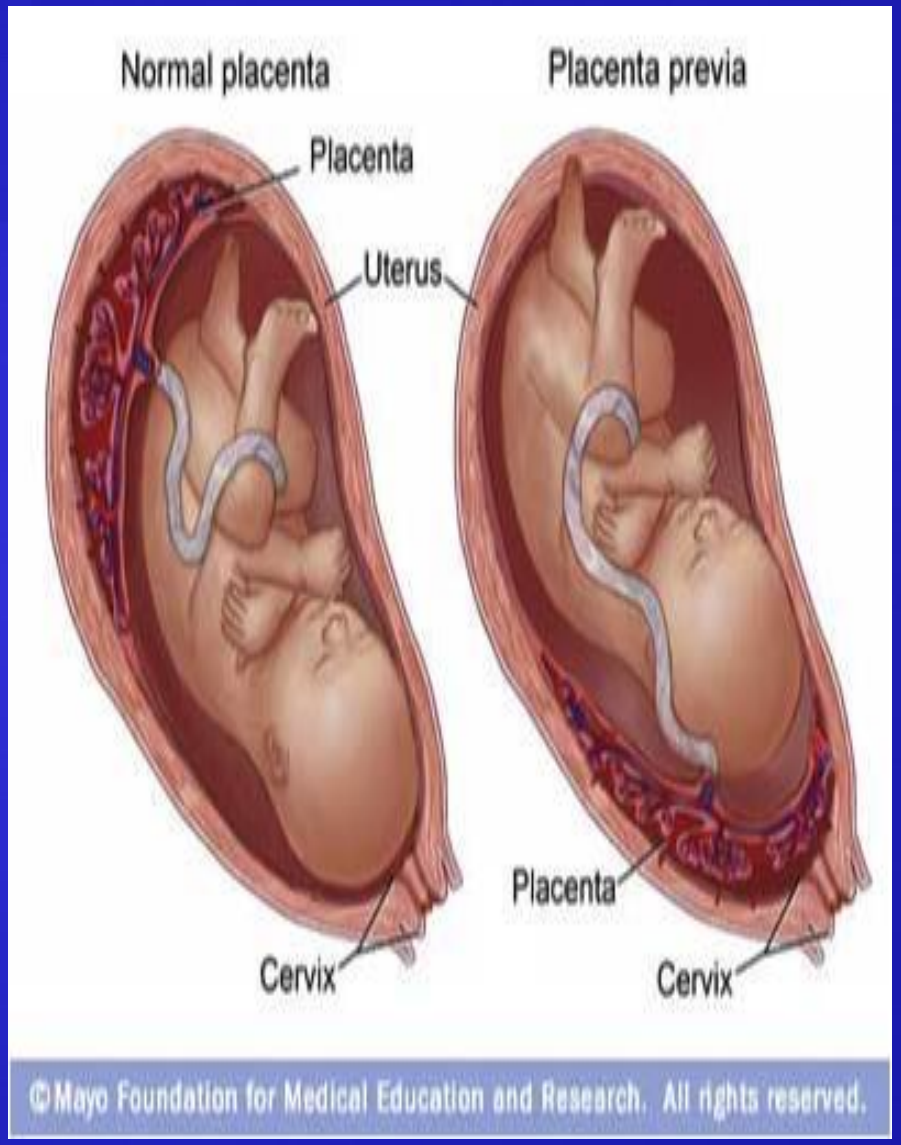
- Can be given in standard doses if no rhythmic uterine contractions are present and there has been no prior uterine surgery

Timing of Delivery after severe abruption

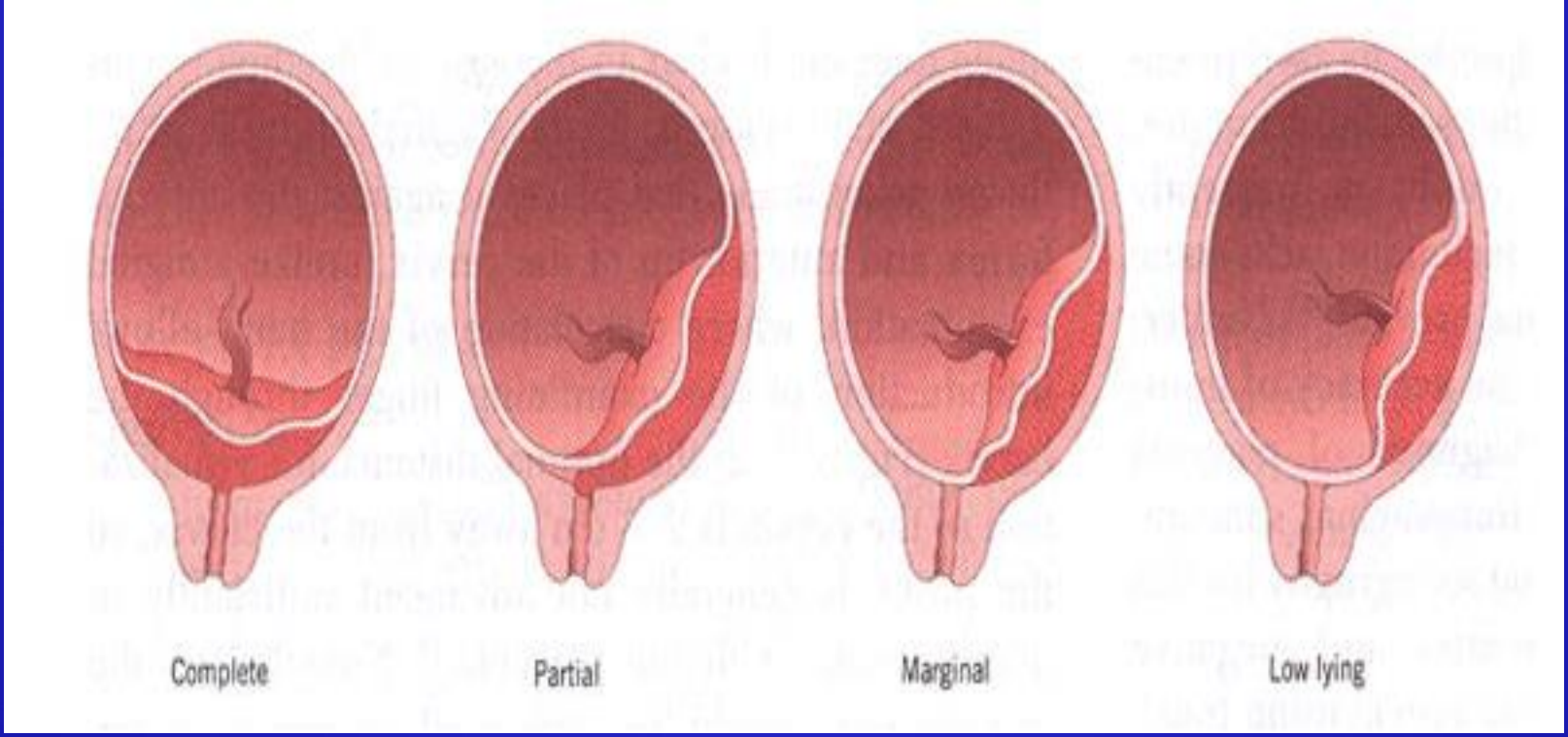
- There is no established time limit for delivery
- Adequate fluid and blood replacement are more important factors for better maternal outcome rather than the interval to delivery

PLACENTA PREVIA

PLACENTA IMPLANTED OVER OR VERY NEAR THE INTERNAL CERVICAL OS



CLASSIFICATION



CLASSIFICATION

- SOMETIMES DEPENDS ON THE EXTENT OF DILATATION DURING ASSESSMENT*
- DIGITAL EXAMINATION IS NOT DONE TO ASSESS THE PREVIA AS THIS CAN INCITE TORENTIAL HEMORRHAGE

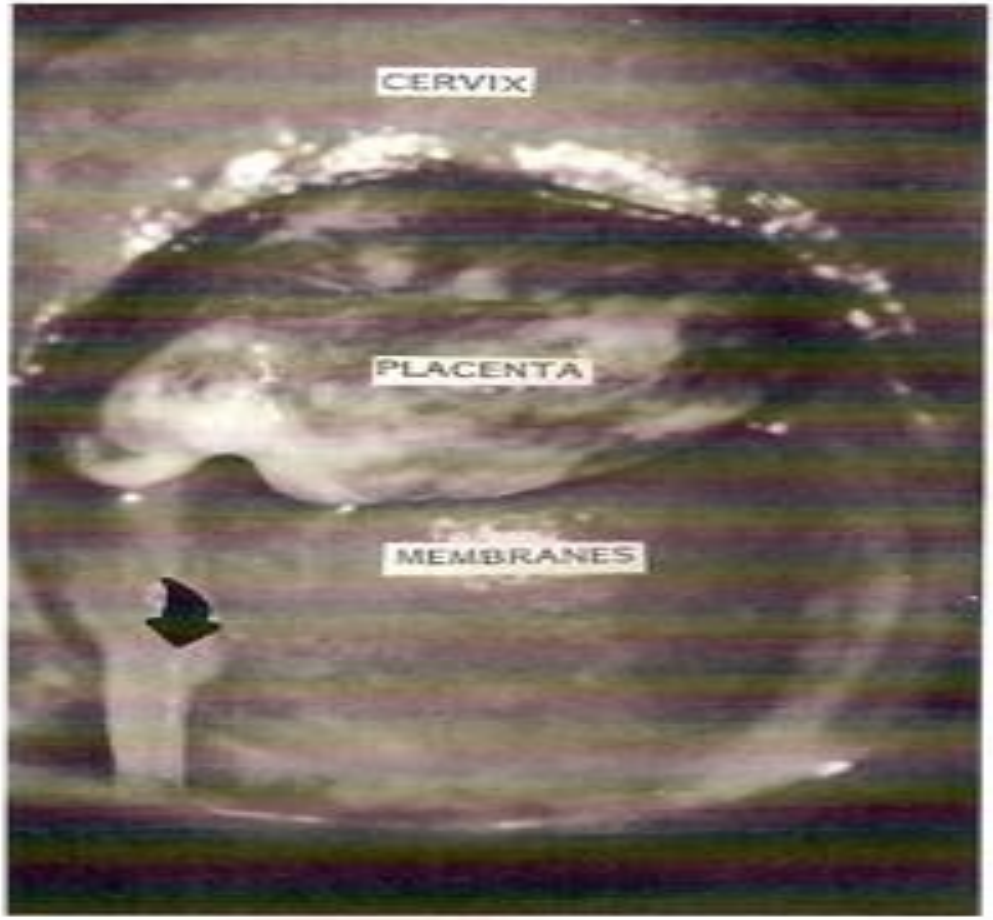


FIGURE 25–11. Partial placenta previa seen through a cervix 3- to 4-cm dilated at 22 weeks' gestation. The arrow points to mucus dripping from the cervix. Uterine cramping was evident, but earlier intermittent bleeding had stopped 1 month before. The fetus weighed 410 g when delivered vaginally the next day. Blood loss was not massive. (Photograph courtesy of Dr. Rigoberto Santos.)

Associated factors

- Advancing maternal age
- Multiparity
- Prior cesarean section*
- Smoking
- Unexplained elevations of maternal serum alpha fetoprotein (MSAFP)

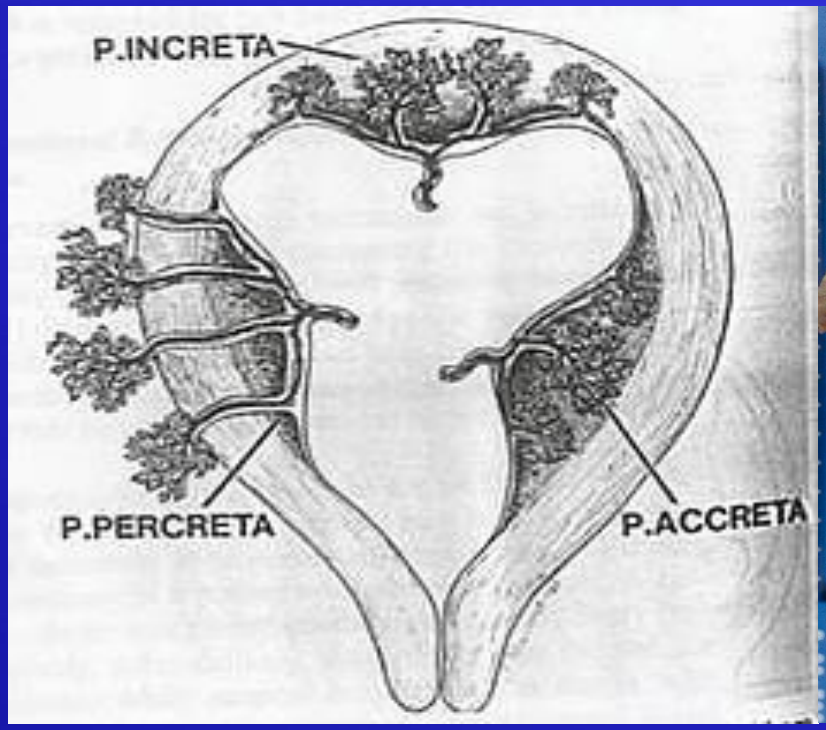
Clinical Findings

UTERINE BLEEDING

- Painless
- End of second trimester and onwards
- Stops and recurs
- Tearing of placental attachment
- Poor contractility of LUS

Clinical Findings

- ACCRETA, INCRETA, PERCRETA may be associated findings



Nitabuch layer (Cleavage Plane)

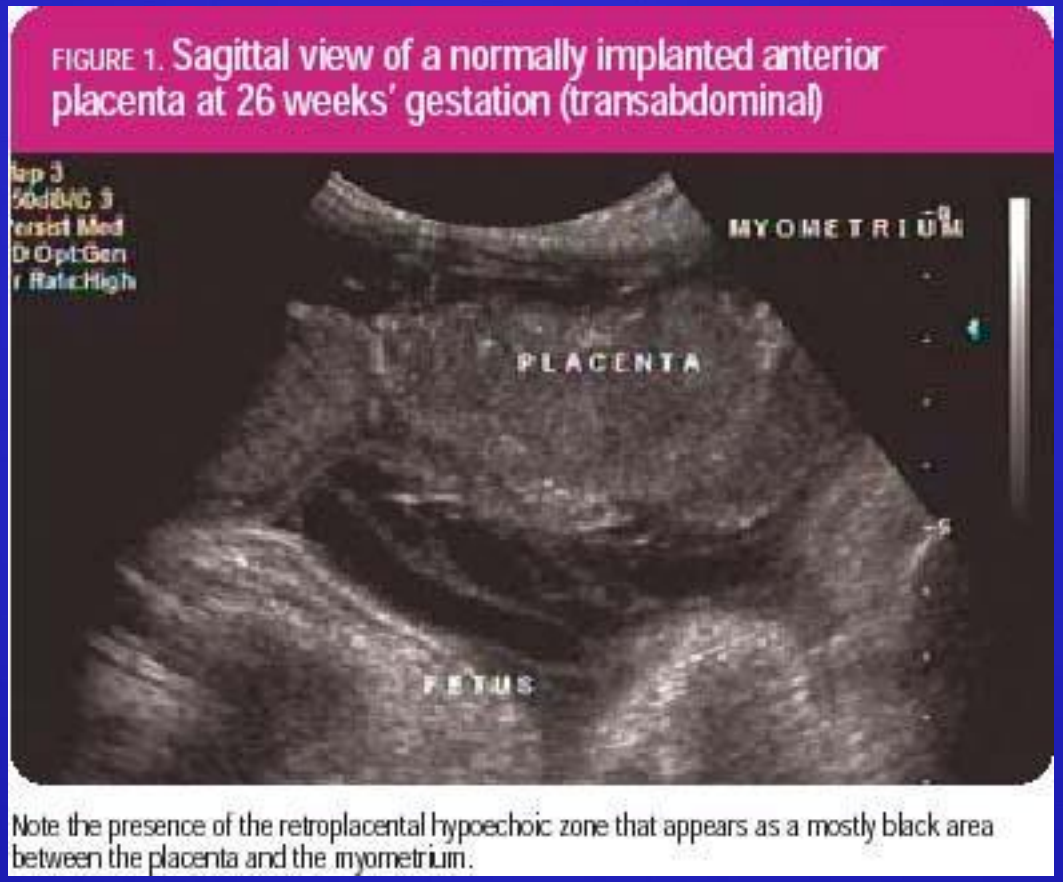


FIGURE 1. Sagittal view of a normally implanted anterior placenta at 26 weeks' gestation (transabdominal)

Note the presence of the retroplacental hypoechoic zone that appears as a mostly black area between the placenta and the myometrium.

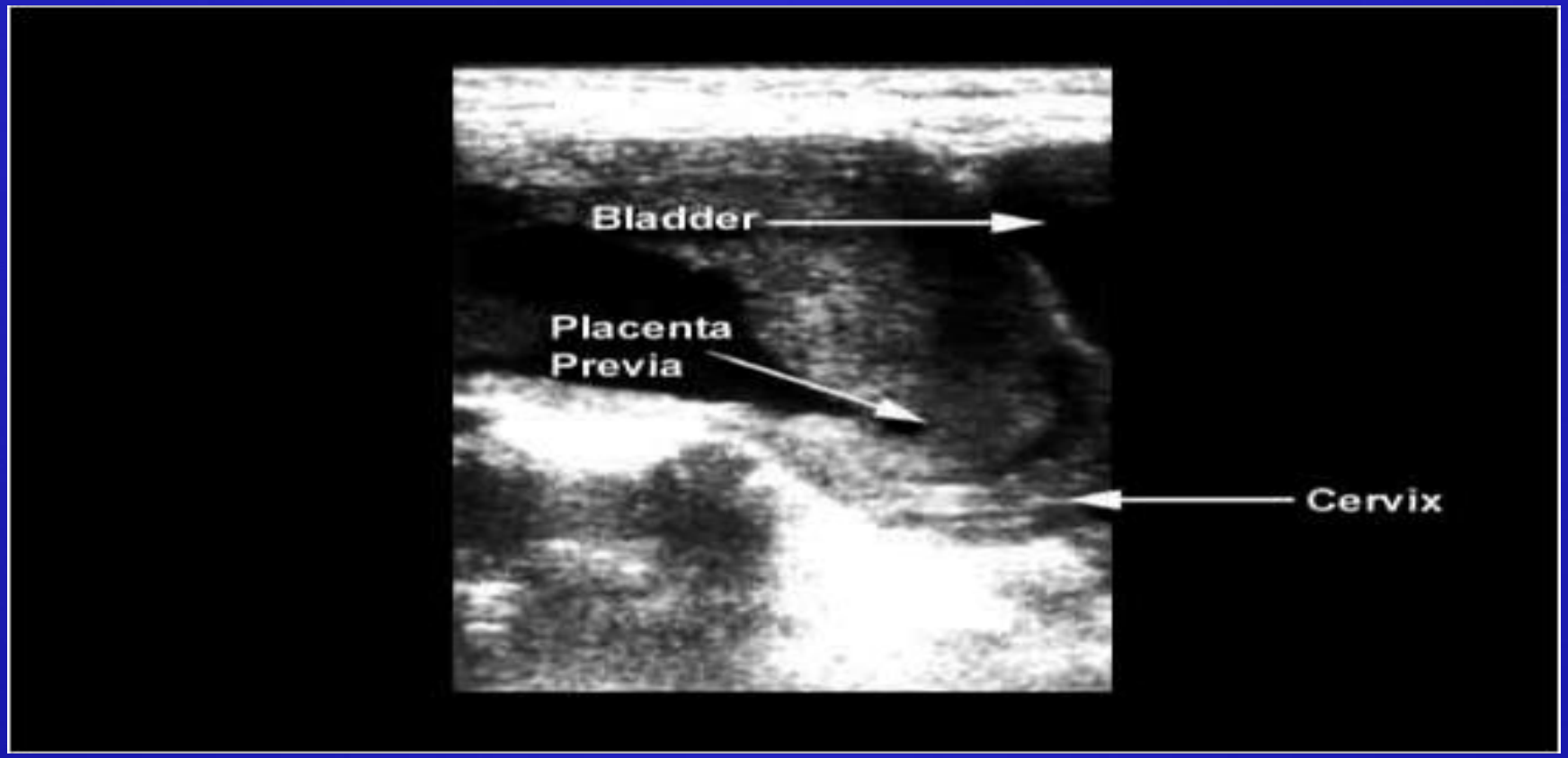
Clinical Findings

- Coagulation defects are NOT COMMON even in extensive separation
- Thromboplastin rarely enters maternal circulation but readily escapes through cervical canal

DIAGNOSIS

- UTERINE BLEEDING IN THE SECOND HALF OF PREGNANCY SHOULD ALWAYS RAISE THE SUSPICION OF EITHER PREVIA OR ABRUPTION
- DIGITAL EXAMINATION IS NOT DONE UNTIL PLACENTA HAS BEEN LOCALIZED AS NOT TO BE IMPLANTED IN THE LUS OR OVER THE OS
- DOUBLE SET-UP IS RARELY NEEDED BECAUSE OF THE AVAILABILITY OF THE ULTRASOUND*

Ultrasound



Placental "Migration"

- Placentas that lie close to the internal os but not over it during the second or early third trimester are UNLIKELY to persist as a previa by term
- If previa is seen prior to 28 weeks, frequent repeated UTZ or restriction of activity is not necessary UNLESS the previa persists beyond 28 weeks or becomes clinically apparent before that time

Management

- CLINICAL SCENARIOS

  1. PRETERM FETUS, NO INDICATION FOR DELIVERY

  2. REASONABLY MATURE FETUS

  3. MOTHER IN LABOR

  4. SEVERE HEMORRHAGE

SCENARIO 1

- Close observation
- Prolonged hospitalization (ideal)
- Hospital discharge: bleeding has stopped, fetus is healthy
- Full patient education
- Immediate availability of transport

Scenarios 2,3 and 4

- Deliver!
- CESAREAN delivery is necessary in all cases of previa using a transverse lower uterine incision
- Vertical incisions- some cases of anteriorly implanted placenta
- Greater bleeding must be anticipated since the implantation site is in the lower uterine segment (LUS) and appropriate surgical intervention for hemostasis be carried out if conservative means fail

Maternal and Fetal Outcomes

- Threefold increase in maternal mortality ratio
- Preterm delivery and perinatal death
- 2.5 fold increase in congenital anomalies
- Growth restriction esp. due to preterm birth