Ante partum Hemorrhage Abruptio Placenta

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Definition

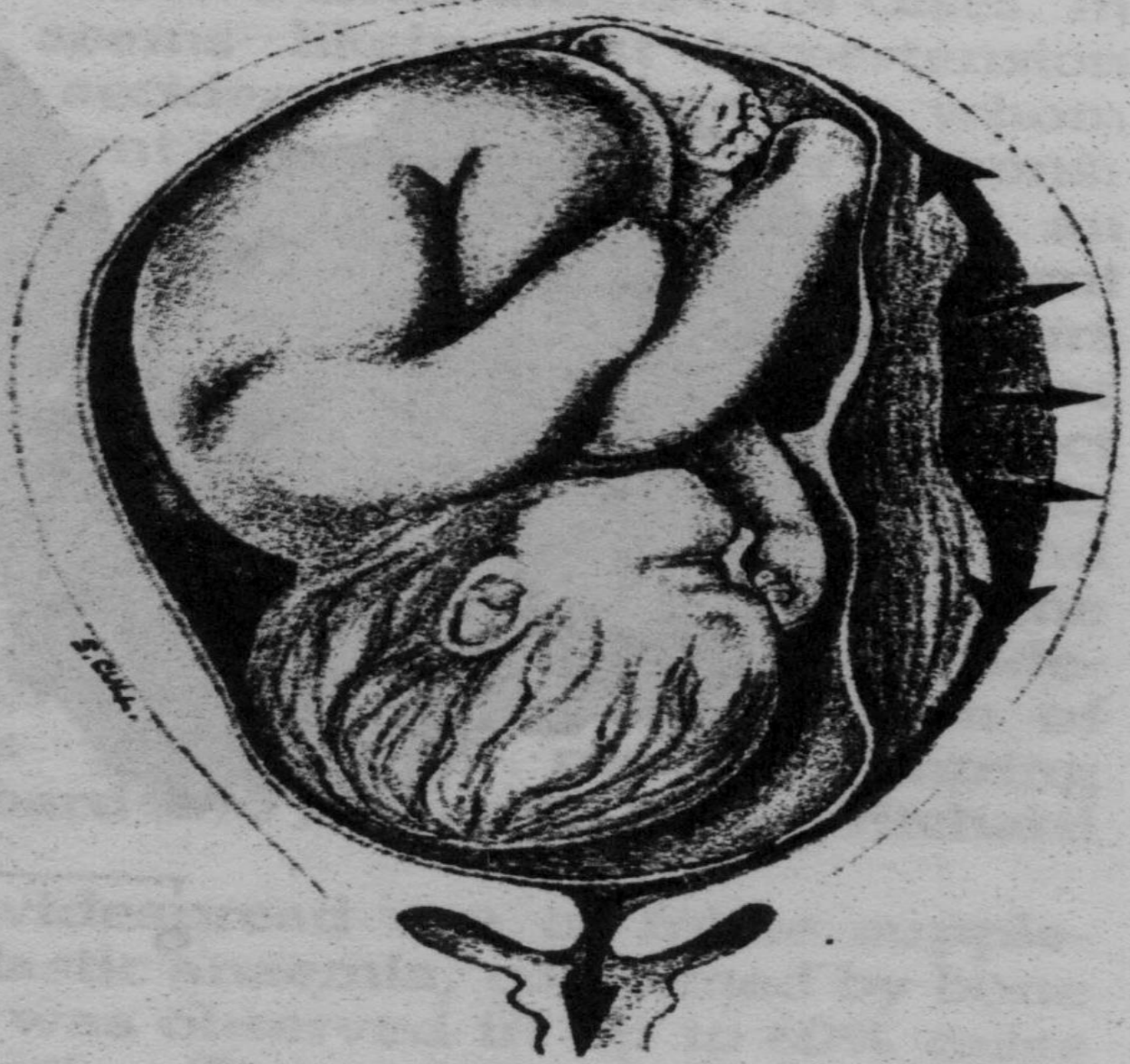
- **Premature separation of a normally situated placenta after the 28th week of pregnancy and before delivery of the fetus.**

- **Incidence**

  0.5-1%.

Etiology

- **Unknown, but the following factors may be associated with:**
- **Hypertensive disorders of pregnancy (30%) due to spasm and degenerative changes in the decidual arterioles.**
- **Trauma as during external version.**
- **Sudden drop of intrauterine pressure as rupture of membranes in polyhydramnios.**
- **Folate deficiency and may be vitamin C, K, or E deficiency.**
- **Passive congestion of the uterus due to pressure of the gravid uterus on the inferior vena cava.**
- **Torsion of the uterus.**
- **Smoking.**



Abruptio placentae. The bleeding is initially concealed but later tracks down and through the cervix to become revealed and may also infiltrate the myometrium

Pathogenesis

- ***Separation of the placenta results in formation of a retro placental hematoma and its extension leads to more separation of the adjacent placental tissue (*concealed hemorrhage*).**
- ***Ultimately the blood reaches the placental margin and tracks between the membranes and uterine wall to escape from the cervix *(revealed hemorrhage).***
- ****The presence of concealed and revealed hemorrhage together called *mixed variety.* Thus the three varieties are actually different presentations to one process.**
- ***If separation of the membranes does not occur, there is progressive disruption of the placental tissue and intravasation of blood through the myometrium even up to the peritoneal coat resulting in *Couvelaire's uterus.***

Pathogenesis

- ***DIC***
- ***Thromboplastin-like substances are released from the damaged placental site and passed to the maternal circulation initiating the process of disseminated intravascular coagulopathy (DIC).**
- ***Acute renal failure** may result from renal ischemia caused by:

a. hypovolaemia,
b. reflex spasm of the renal vessels due to sudden distension of the uterus,
c. occlusion of the glomerular capillaries by microthrombi from DIC, and /or
d. kidney pathology caused by hypertensive states of pregnancy.

- **Early stage of renal ischemia causes renal tubular necrosis which is reversible. Later on , irreversible cortical necrosis occurs**

- ***Postpartum hemorrhage*** is common as the result of:

-Uterine damage and atony
-coagulation failure (DIC),
- anemia
-inhibition of myometrium activity by fibrinogen degradation products (FDP) present in DIC

- ***Sheehan's syndrome*: severe ante partum and / or postpartum hemorrhage lead to necrosis of the anterior pituitary.**

Diagnosis

- **Symptoms:**
- **Acute constant severe abdominal pain which may be localized or diffuse.**
- **Dark vaginal bleeding results from escape of blood from the retro placental hematoma.**
- **Cessation of fetal movement is common.**

Diagnosis

- **Signs:**
- ***(A) General examination:***
- **1- Shock is usually present and may be marked and not proportionate to the amount of visible bleeding due to :**
- **- concealed and/ or revealed hemorrhage,**
- **- over distension of the uterus and damage of the myometrium causing neurogenic shock.**
- **2- Blood pressure is;**
- **- subnormal due to hemorrhage,**
- **- normal due to falling from previous hypertension or**
- **- high due to slight bleeding in hypertensive patient.**
- **3- Tachycardia.**

Diagnosis

- ***(B) Abdominal examination:***
- **Uterus is large for date and increasing gradually in size due to retained blood.**
- **Uterus is very tender and hard (board-like).**
- **Fetal parts are difficult to be felt.**
- **FHS may be absent due to fetal death in severe cases or distressed in mild cases.**
- ***(C) Vaginal examination:***
- **Done under the same precautions in placenta praevia may reveal:**
- **Vaginal bleeding which is dark as it is retained for some time before escape.**
- **If the cervix is dilated the placenta is not felt.**

Diagnosis

- **Differential diagnosis:**
- **Other causes of ante partum hemorrhage.**
- **Other causes of acute abdomen.**
- **Investigations:**
- ***Ultrasound :*** **detects normally sited placenta with retro placental hematoma that may dissect the placental margin.**
- ***Tests for DIC*** **(platelet,fibrinogen,PTT,aPTT)**

Treatment

- **At home:**
- **Arrange for immediate transfar to the hospital.**
- **No vaginal examination and no vaginal pack, only a sterile vulval pad is applied.**
- **No oral intake as anesthesia may be required.**
- **Antishock measures as pethidine IM, fluids and blood transfusion may be given in the way to the hospital if bleeding is severe.**

Treatment

- **At hospital**
- **Assessment of the patient's condition, general and abdominal examination and resuscitation.**
- **Blood volume preservation.**
- **Ultrasonography.**

Treatment

- ***Delivery:***
- **Patient with abruptio placenta has to be delivered and usually there is no place for conservative treatment.**
- ***(I) Amniotomy + oxytocin* if :**
- **- bleeding is not severe,**
- **- vertex presentation,**
- **- the cervix is partially dilated.**
- **- adequate pelvis with no soft tissue obstruction,**
- **Advantages of amniotomy:**
- **1 - It reduces the intrauterine tension, intravasation of blood between myometrial muscles and its damage.**
- **2- Reduces the pain and shock.**
- **3- Reduces the incidence of renal failure.**
- **4- Stimulates the onset of labor and improves uterine contractions pattern.**

Treatment

- ***(II) Caesarean section is* indicated in :**
- **- Severe hemorrhage whether the fetus is dead or alive.**
- **- Living fetus and labor is expected to be longer than 6 hours e.g. closed cervix.**
- **- Fetal distress.**
- **- Failure of progress after amniotomy + oxytocin.**
- **- Other indications for C.S. as contracted pelvis, malpresentations and elderly primigravida.**
- ***Postpartum:***
- **The patient is more liable for postpartum hemorrhage so oxytocin is continued after delivery of the fetus, methergin is given with delivery of the shoulders if there is no hypertension with continuous massage of the uterus.**

Complications

Maternal

- ***Abruptio placenta is responsible for 6% of maternal mortality**
- ***Maternal morbidity is related to :**
- **1-Cesearean Delivery…often is necessary if the patient is remote from delivery or if significant fetal compromise develops.**
- **2-Hemorrhage/coagulopathy.DIC may occur as a squeal of abruption**

- **Fetal**
- ***The overall fetal mortality rate is 20-40% depending on the**
- **extent of the abruption**
- ***Fetal morbidity is caused by the insult of abruption itself and the issues related to prematurity**

Deferential diagnosis with Placenta praevia

- Shock not related to amount of bleeding, BP may be normal or elevated
- Abdomen rigid and fetal parts difficult to palpate and fetal heart may be absent
- Vaginal bleeding dark in color

- Shock related to amount of bleeding
- Abdomen is lax with easy palpable fetal parts with malpresentation or non engagement of presenting part, fetal heart usually present
- Bleeding usually bright red