Abnormal vaginal bleeding in second half of pregnancy

ผศ.นพ.วัลลภ ปานพูนทรัพย์ ภาควิชาสูติศาสตร์-นรีเวชวิทยา ศูนย์การแพทย์สมเด็จพระเทพรัตนราชสุดา ศรีโสภาพัณณิชยราญ คณะแพทยศาสตร์ มศว.
Definition

- Vaginal bleeding after 20 weeks gestational age (before delivery) may be cause of maternal mortality and associate with perinatal morbidity and mortality

Incidence

5-10% of pregnancy
Obstetric cause

- bloody show
- placenta previa
- placental abruption
- uterine rupture
- vasa previa
Gynecologic cause

- cervicitis
- cervical polyps
- vaginal laceration, foreign bodies
- varices
- benign and malignant neoplasms of genital organs
Non obstetric-gynecologic cause

Hematologic diseases
- Thrombocytopenia
- Coagulopathy
- Platelet dysfunction
- etc.
Placenta Previa
Definition and Classification

The placenta located over or very near the internal os, classified as:
- Total placenta previa
- Partial placenta previa
- Marginal placenta previa
- Low-lying placenta
Definition and Classification

• Total placenta previa: the internal os is covered completely by placenta
• Partial placenta previa: the internal os is partially covered by placenta
• Marginal placenta previa: the edge of the placenta is at the margin of the internal os
• Low lying placenta: the placenta is implanted in the lower uterine segment, the placenta edge does not reach the internal os but is in close proximity to it
Etiology

- defective vascularization of the decidua, inflammatory process or atrophic changes
  - multiparity
  - advancing age
- previous cesarean delivery or uterine surgical scar
- large placenta: multiple fetuses, erythroblastosis
- others: smoking, cocaine use
Signs and symptoms

- Painless hemorrhage usually near the end of the second trimester
- Abnormal fetal presentation about 1/3 of cases
Diagnosis

painless bleeding
uterus : soft, no tenderness
fetus : may be in oblique or transverse lie
    presenting part not engaged
Ultrasonography - accuracy 95-98 %
    transvaginal ultrasound identify
        internal os better than
    transabdominal ultrasound
    (double set up)
Management

- Depend on severity of bleeding, gestational age, fetal maturity and fetal well-being
- Principle of management
  - Hospitalization with hemodynamic stabilization
  - Obstetric evaluation
  - Do not PV or PR
Management

- Preterm fetus, good fetal well-being with no active bleeding
  - expectant, close observation
  - very sedentary lifestyle
  - avoidance of any intravaginal manipulation: vag douch, PV, etc.
  - immediate availability of appropriate therapy
Management

- The fetus with poor fetal assessment or more than 37 weeks gestation or severe hemorrhage as to necessitate immediate delivery of the fetus
  - Cesarean delivery: in most cases - transverse incision or vertical uterine incision
  - Vaginal delivery: in cases of low-lying placenta or marginal placenta previa
Complication

Maternal
- Postpartum hemorrhage
- Infection
- Embolism

Fetus
- Preterm (major cause of perinatal death)
- Intrauterine asphyxia
- IUGR
Placental Abruption
Definition

- The separation of the placenta from its site of implantation in the uterus before the delivery of the fetus
- abruption placentae, ablatio placentae, premature separation of the normally implanted placenta
Pathology

hemorrhage from a decidual spiral artery into the decidua basalis
(the bleeding between the membranes and uterus, retroplacental hematoma)
Classification

- acute placental abruption and chronic placental abruption
  or
  - external hemorrhage (revealed hemorrhage) ~80-85%
  - no external hemorrhage (concealed hemorrhage) ~15-20%
  - Mixed type
  or
  marginal separation, partial separation, complete separation
Partial separation

Complete separation with concealed hemorrhage

Marginal separation
Etiology

• unknown
Risk factor

- Prior abruption
- Hypertensive disorder in pregnancy
- Sudden decompression of the uterus: after amniotomy, hydramnios
- Shortness of the umbilical cord: esp. in multifetal pregnancy
- Uterine anomaly or tumor
- Pressure by the enlarged uterus on the inferior vena cava
- Increased age and parity
- Ethanol consumption, cigarette smoking, cocaine use, dietary deficiency
- External trauma
Pathology

Local vascular injury in decidua basalis
Decidual spiral artery rupture
  (uterine venous pressure)
  ↓
Retroplacental hematoma
  ↓
Separation of placenta
Signs and symptoms

* may be no clinical symptoms in early stage
* profuse external bleeding per vagina
* uterine tenderness, rapid uterine contraction or tetanic uterine contraction
Signs and symptoms

- Hypotension, Shock out of proportion to the amount of hemorrhage
- Fetal heart rate decelerations or no FHR been heard
Clinical findings

- Classical: pain, uterine tenderness and rigidity, fetal distress or absent fetal heart sound (Decreased short-term variability, increased baseline uterine tone, uterine hyperstimulation, and worsening variable decelerations)
- Vaginal bleeding, shock
- Shock not relate to vaginal bleeding
- Idiopathic preterm labor
Clinical findings

• Vaginal bleeding 78%
• Uterine tenderness or back pain 66%
• Fetal distress 60%
• Preterm labor 22%
• High frequency contraction, hypertonus 17%
• Dead fetus 15%
Laboratory findings

- Hct decrease
- Thrombocytopenia
- Hypofibrinogenemia (fibrinogen < 150 mg/dl)
- Elevated FDP > 20 ug/ml
- Abnormal coagulogram
Ultrasound findings

- Retroplacental hematoma
- Exclude placenta previa

Differential diagnosis

- Placenta previa
- Rupture of the uterus
Complication

* Consumptive coagulopathy: hypofibrinogenemia (less than 150 mg/dl of plasma), elevated levels of fibrinogen-fibrin degradation products, decrease of coagulation factors

* Renal failure may be from impaired renal perfusion

* Uteroplacental Apoplexy (Couvelaire Uterus): extravasations of blood into the uterine musculature and beneath the uterine serosa

* feto-maternal hemorrhage

* Post-partum hemorrhage

* Death of the fetus
Uteroplacental Apoplexy

(Couvelaire Uterus)
Management

- Evaluation for fetal well-being, maternal circulation status
- Intense therapy with blood, coagulation factor, plus electrolyte solution in case of serious maternal hemorrhage
- Prompt delivery (may be very close observation coupled with facilities for immediate intervention in mild cases)
Route of delivery

- **Cesarean section**
  - Fetal distress, unfavorable cervix
  - Uncontrol bleeding

- **Vaginal delivery with induction of labor by oxytocin infusion and amniotomy**
  - Dead fetus with control bleeding
  - Favorable cervix, rapid progress of labor, stable maternal hemodynamic, no fetal distress
prognosis

• Fetal mortality rate 60-80 %
• Maternal mortality rate 1-5 %
Rupture of the uterus
Rupture of the uterus

- Complete uterine rupture
- Incomplete uterine rupture (uterine dehiscence)
Predisposing factors

• Uterine injury or abnormality during current pregnancy
  - before delivery
    persistent, intense, spontaneous contractions or uterine hyperstimulation
    external version
    uterine overdistension: hydramnios
  - During delivery
    obstructed labor
    internal version
    difficult forceps delivery
    breech extraction
Predisposing factors

- Others:
  - placenta increta or percreta
  - previous surgery involving the myometrium: cesarean section
  - congenital anomaly
  - grand multiparity
  - coincidental uterine trauma
How to diagnosis

- uterine scar
- suprapubic pain and tenderness
- vaginal bleeding
- cessation of uterine contractions
- pathological retraction ring (Bandl’ring)
- disappearance of fetal heart sound
- recession of the presenting part (loss of station)
- easily palpated fetus
- hypovolemic shock with hemoperitoneum
management

- hemodynamic stabilization
- emergency surgery:
  repair wound with or without internal iliac ligation or hysterectomy depend on maternal condition pathology of the uterus, need of child-bearing)
complication

- amniotic fluid embolism
- hypovolemic shock
- DIC
- ureteral injury
- postoperative infection
prognosis

- Perinatal mortality rate 40-70%
- Maternal mortality rate 5-40%
Thank you for your attention

Rupture of vasa previa
vasa previa

- incidence 1:3000 – 1:5000 pregnancies
- associated with
  - velamentous insertion (fetal vessels in the membranes cross the region of the cervical os)
  - Marginal cord insertion
  - Bilobed or succenturiate-lobed placenta
vasa previa

How to diagnosis
- palpate or directly visualize fetal vessel in the membrane overlying the presenting part of the fetus
- ultrasonography: color doppler
- Lab: fetal blood
- bloody amniotic fluid during amniotomy with FHR change
management

-immediate vaginal delivery or cesarean section

Prognosis

-Fetal death 60-70%
Thank you for your attention