OBSTETRIC EMERGENCIES

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Introduction & Objectives

- Definition of obstetric emergencies: Life-threatening conditions during pregnancy, labor, or postpartum that require urgent intervention.
- Importance of prompt recognition and a coordinated, multidisciplinary team response.
- Presentation Objectives:
  - Identify common obstetric emergencies.
  - Recognize key signs and symptoms.
  - Understand initial stabilization and management protocols.

General Principles of Management

- **Call for Help:** Immediately alert the multidisciplinary team ("Obstetric emergency!").
- **ABCs:** Assess Airway, Breathing, and Circulation (maternal well-being is the priority).
- **Positioning:** Place patient in a position of comfort or left lateral tilt.
- **Oxygenation:** Administer high-concentration oxygen.
- **IV Access:** Insert two large-bore IV catheters.
- **Communication:** Maintain clear communication among team members.

Postpartum Hemorrhage (PPH) - Overview

- **Title:** Postpartum Hemorrhage (PPH)
- **Content:**
  - **Definition:** Blood loss >500 mL after vaginal delivery or >1000 mL after C-section.
  - **Incidence:** A leading cause of maternal mortality worldwide.
  - **Causes (The 4 Ts):**
  - Tone (atony, 70%)
  - Trauma (lacerations, rupture)
  - Tissue (retained placenta)
  - Thrombin (coagulopathy).

Recognition and Initial Management

- **Signs:** Continuous or sudden heavy vaginal bleeding, boggy uterus, signs of shock (tachycardia, pallor, hypotension).
- **Management (Tone):**
  - **Fundal Massage:** Vigorous bimanual compression to stimulate uterine contraction.
  - **Uterotonics:**
    - **Oxytocin (Pitocin)**
    - **Misoprostol (Cytotec)**
    - **Methergine**
    - **Carboprost (Hemabate)**

Advanced Response

- **Further Steps:**
- Manage shock
- Manual exploration of uterus
- Ultrasound for retained POC
- CBC and "coags" (CBC, plt, fibrinogen)
- Meticulous assessment for lacerations
- JADA device
- Operative intervention

Hypertensive Disorders - Preeclampsia & Eclampsia

- **Preeclampsia:** Hypertension after 20 weeks gestation, with proteinuria or organ dysfunction.
  - Hypertension > 140/90
  - Proteinuria ≥300 mg/24 hr, urine protein/creatinine ratio >0.3,
  - Thrombocytopenia (platelets <100,000)
  - Renal insufficiency (Cr >1.1)
  - Impaired liver function (AST and ALT elevated above twice the normal limit)
  - Pulmonary edema
  - Cerebral or visual symptoms
- **Eclampsia:** The occurrence of seizures in a woman with preeclampsia.
- **Risk Factors:** History of preeclampsia, chronic hypertension, diabetes, obesity, multiple pregnancies.

Eclampsia - Recognition and Management

- **Signs:** Severe headache, blurred vision, upper abdominal pain, nausea, convulsions/seizures.
- **Management:**
  - **Seizure Management:** Ensure airway safety.
  - **Medication:** Administer Magnesium Sulfate (MgSO4) for seizure prevention/treatment.
  - **BP Control:** Use antihypertensive medications.
  - **Consider other etiology of seizure:** Sepsis, etc.
  - **Delivery:** Stabilize mom, assess fetus, induce if possible

Shoulder Dystocia - Overview

- **Definition:** Delay in delivery of body after delivery of head
- **Etiology:** Impaction of the anterior fetal shoulder against the maternal pubic symphysis after delivery of the head.
- **Incidence:** Occurs in approximately 1% of deliveries.
- **Risk Factors:** Fetal macrosomia (large baby), maternal diabetes, obesity, post-term pregnancy.

Shoulder Dystocia - Management (HELPERR)

- **H**elp: Call for assistance immediately.
- **E**pisiotomy: To make room for maneuvers, not to free the shoulder.
- **L**egs (McRoberts Maneuver): Hyperflexion of maternal hips towards the abdomen.
- **P**ressure (Suprapubic): Apply pressure posteriorly over the pubic symphysis.
- **E**nter (internal maneuvers): Rubin's or Wood's screw maneuver to rotate shoulders.
- **R**emove posterior arm: Grasp and sweep the posterior arm out.
- **R**oll the patient: To hands and knees position.


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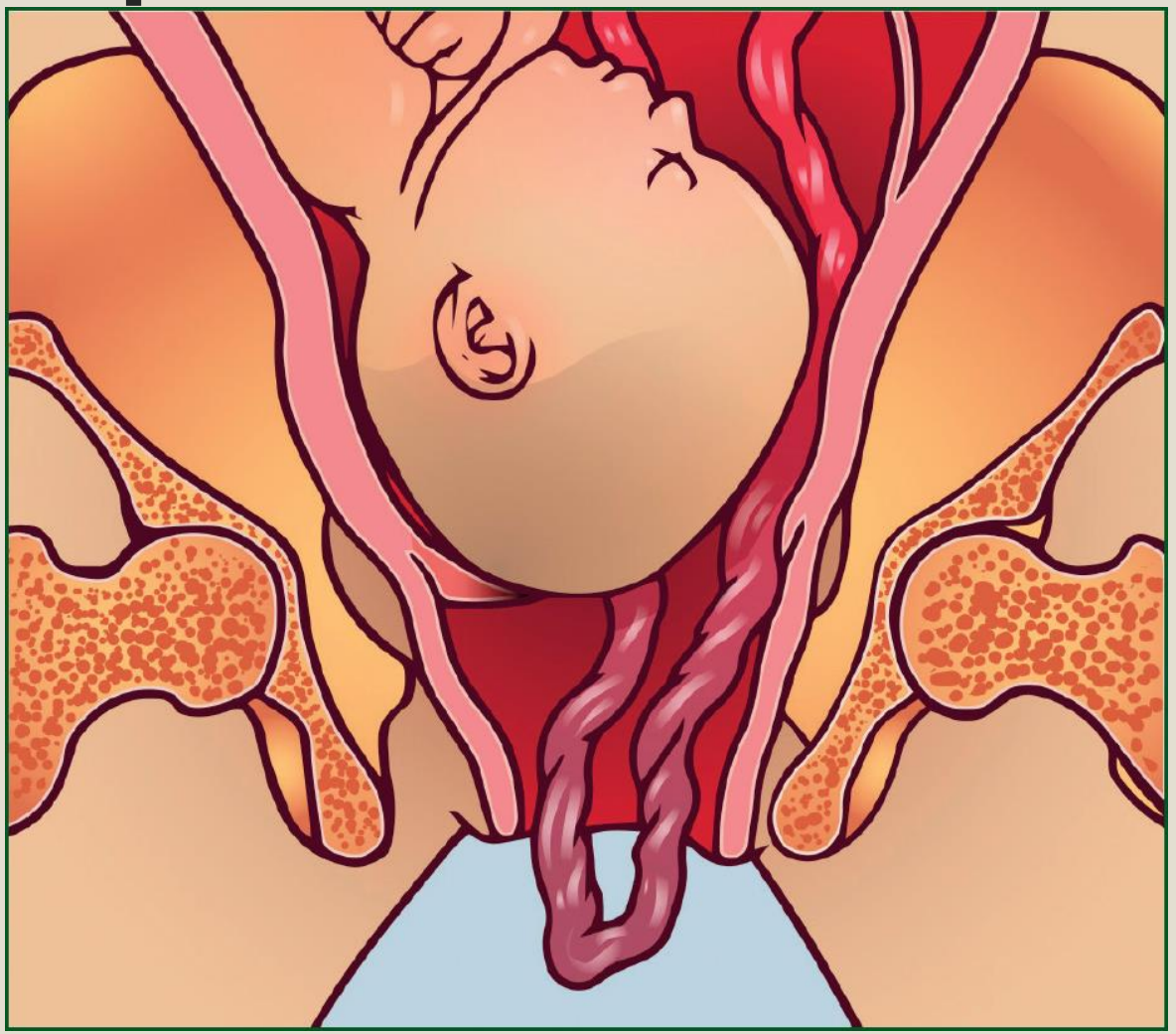
Umbilical Cord Prolapse - Overview

- **Definition:** Umbilical cord drops into the vagina. Cord is pinched between head and pelvis
- **Incidence:** Rare, about 0.1-0.6% of deliveries.
- **Risk Factors:** Premature rupture of membranes, abnormal fetal lie/presentation (breech, transverse), unengaged presenting part, polyhydramnios, prematurity.
- **Doctors & Nurses:** Cause nearly all cases

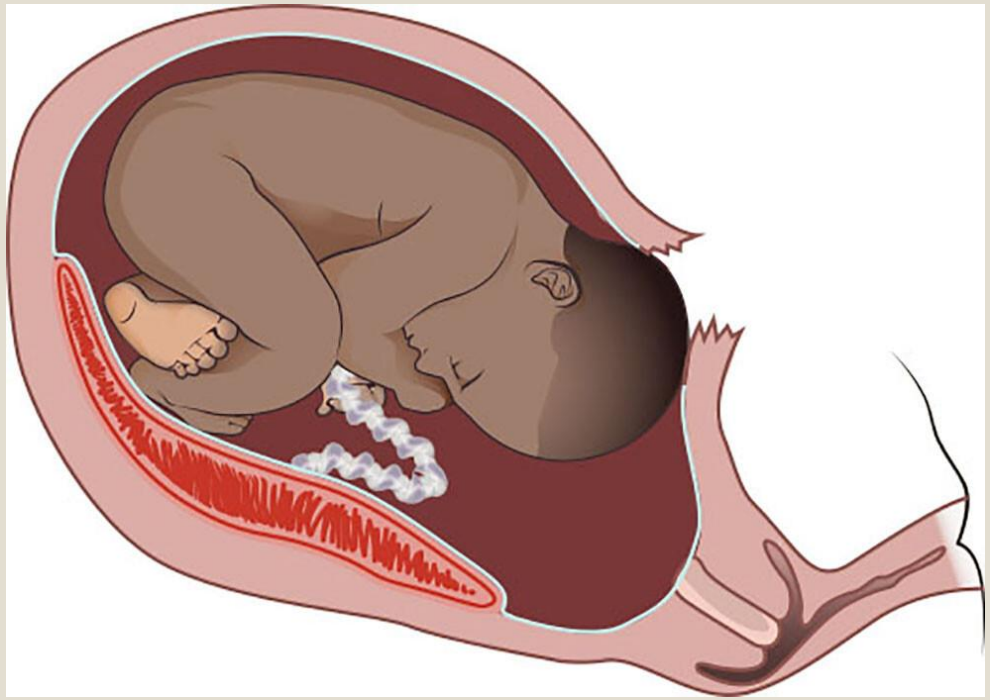


Cord Prolapse - Recognition and Management

- **Signs:** Visible or palpable cord from the vagina, sudden fetal heart rate decelerations (bradycardia).
- **Management:**
  - **Immediate Action:** Relieve pressure on the cord (manually elevate the presenting part).
  - **Positioning:** Place patient in knee-chest or exaggerated Trendelenburg position.
  - **Leave** the prolapsed cord alone
  - **Expedite Delivery:** Emergency C-section is indicated.
- **Prevention:**
  - **Gentle** cervical exam. Avoid rupturing membranes with fingers
  - **Ensure** fetal head against cervix when rupturing membranes
  - **Two** people check cervix before rupturing membranes
  - **Always** double check circumference of cervix for presence of cord after rupture

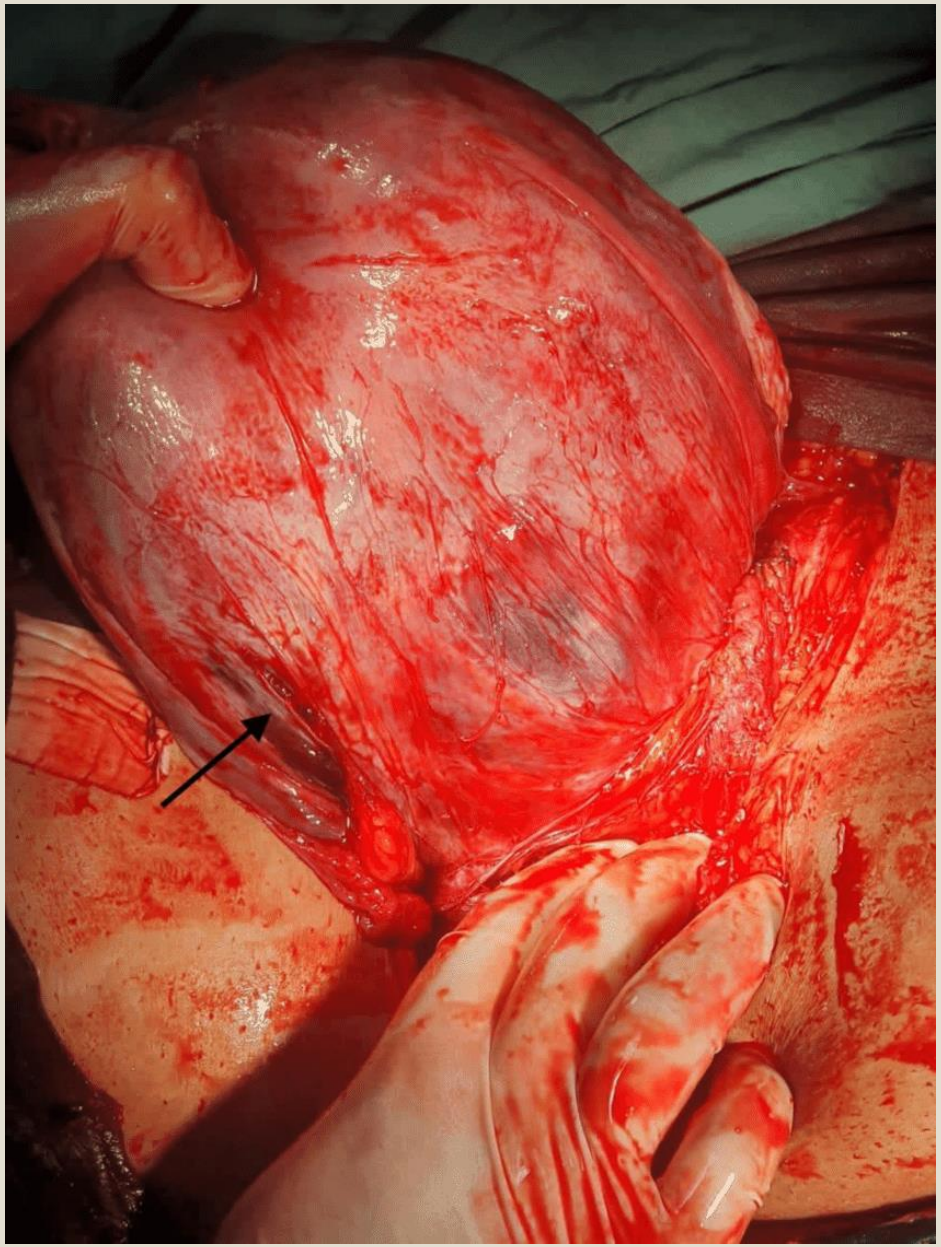
Uterine Rupture - Overview

- **Definition:** Tear through the uterine wall, usually in labor, often **iatrogenic**
- **Risk Factors:** Previous C-section scar (primary risk factor), prior uterine surgery (myomectomy), intense spontaneous contractions, labor stimulation (oxytocin, prostaglandins).



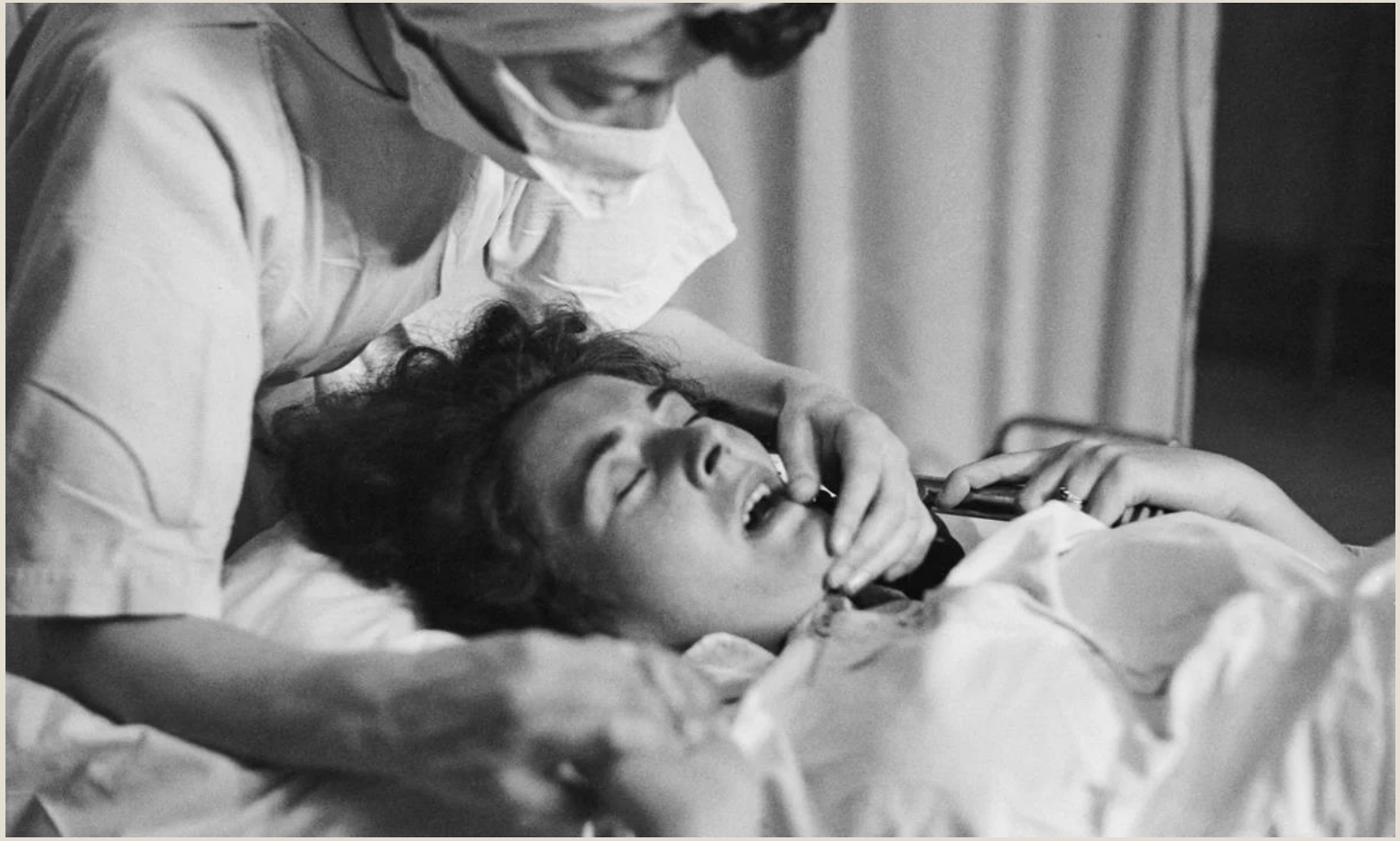
Uterine Rupture - Recognition and Management

- **Signs:**
  - Sudden onset of severe abdominal pain
  - *Sudden cessation of contractions*
  - Vaginal bleeding
  - Fetal heart rate decelerations (most common sign)
  - Maternal shock.
- **Management:**
  - Rapid stabilization (fluids, blood transfusion).
  - Emergency cesarean section
  - Uterine repair or hysterectomy depending on severity.



Amniotic Fluid Embolism (AFE) - Overview

- **Definition:** A rare, condition occuring when amniotic fluid, fetal cells, and debris enter the maternal circulation, triggering a catastrophic immune response.
- **Presentation:** Typically during labor or shortly after delivery
- **Risk Factors:** Uncertain. Possibly instrumented delivery, cesarean section, labor induction



AFE - Recognition and Management

- **Signs:**
  - Sudden maternal collapse
  - Acute respiratory distress (pulmonary edema)
  - Profound hypotension (blood loss, vasogenic shock)
  - Coagulopathy (massive hemorrhage due to disseminated intravascular coagulation
  - Altered mental status or seizures (cerebral edema)
- **Management:**
  - Immediate resuscitation (ABCs, intubation, mechanical ventilation).
  - Critical care consultation
  - Cardiopulmonary support and management of shock.
  - Manage massive hemorrhage and disseminated intravascular coagulation (DIC) with blood products.

Sepsis in Pregnancy

- **Definition:** Life-threatening organ dysfunction caused by a dysregulated response to infection.
- **Challenge:** Early signs (tachycardia, increased cardiac output) can mimic normal physiological changes of pregnancy.
- **Sources:** Chorioamnionitis, pyelonephritis, postpartum endometritis, septic abortion.

Sepsis - Recognition and Management

- **Signs:** Fever, tachycardia, tachypnea, leukocytosis, altered mental status, signs of poor perfusion, signs of source infection.
- **Management:**
  - Fluid resuscitation.
  - Blood and urine cultures with chest x-ray and careful physical exam
  - Broad-spectrum antibiotics immediately after cultures.
  - Identify and control source of infection.
  - Supportive care, with attention to blood pressure

Preparedness and Team Training

- **Importance:** Regular simulation and team training (fire drills) are vital for maintaining skills and improving outcomes.
- **Focus:** Teamwork, communication, and knowledge of key algorithms are crucial.
- **Goal:** Build community, and ensure a uniform and effective team reaction to acute problems.

General Pointers

- Meditate on risk factors such as previous outcomes, history of surgery, large baby, slow labor progress
- Pay attention to vital signs and bleeding before lab results and imaging
- When called, go immediately to bedside in person
- Listen to team members' concerns and respond and seek feedback
- Ask questions of patient, family, and team members
- Be attentive to your own sense of unease

Conclusion

- Thanks for your attention
- Questions?