# Block X: Obstetrics Mgmt

HEMORRHAGE • HYPERTENSION • LABOR • PUERPERIUM

KMU - FINAL YEAR MBBS

## EMERGENCY: ANTEPARTUM HEMORRHAGE (APH)

- **Immediate:** Call for help → 2 large bore IV cannulas (16G) → Cross match blood → Vitals monitoring.
- **Placenta Previa (Painless):**
  - Admit → Steroids (<34w) → Elective C-Section @ 37w.
  - If bleeding severe: Emergency CS irrespective of GA.
- **Abruptio Placentae (Painful + Hard uterus):**
  - **Grade 0-1:** Conservative if stable + FHR ok.
  - **Grade 2-3 (Fetal distress/Dead):** Stabilize (FFP/Blood) → Immediate Delivery (Vaginal if dead, CS if live/distress).

**WARNING**

**NEVER do PV exam in suspected Placenta Previa** (Risk of torrential bleed). Diagnosis by TVS.

## PROTOCOL: POSTPARTUM HEMORRHAGE (4 Ts)

**1. TONE (Atonic Uterus - 70%)**

- Uterine Massage + Bimanual Compression.
- **Oxytocin:** 10U IM stat or 20-40U in 1L NS IV (150ml/hr).
- **Ergometrine:** 0.2mg IM (Contraindicated in HTN/Heart Dis).
- **Carboprost (PGF2$\alpha$):** 250mcg IM q15min (Max 8 doses). Avoid in Asthma.
- **Misoprostol:** 800-1000mcg PR.
- **Surgical:** B-Lynch Suture → Uterine Art. Ligation → Hysterectomy.

**2. TISSUE:** Explore uterus → Manual removal of placenta (MROP) under GA. **3. TRAUMA:** Inspect cervix/vagina → Suture repair. **4. THROMBIN:** Correct coagulopathy (FFP, Cryo, Platelets).

## HYPERTENSIVE DISORDERS

**1. Chronic HTN (<20wks):**

- Methyldopa 250-500mg TDS OR Labetalol 100-400mg TDS.
- Target BP: 135/85 mmHg.

**2. Severe Pre-Eclampsia (BP ≥160/110 + Proteinuria):**

- Admit → IV Labetalol/Hydralazine.
- **$MgSO_4$ Protocol:** Loading 4g IV (over 20 min) → Maintenance 1g/hr IV for 24hrs.
- Monitor: RR >12, Urine >30ml/hr, Reflexes (+).
- Antidote: 10ml 10% Ca Gluconate IV.
- **Delivery:** Stabilize → Induce/CS (Definitive Rx).

**3. HELLP Syndrome:**

- Hemolysis, EL (Liver enz), LP (Low platelets <100k).
- Rx: Dexamethasone + $MgSO_4$ + Urgent Delivery.

## EMERGENCY: ECLAMPSIA MANAGEMENT

**A**irway (Left lateral decubitus, suction)
**B**reathing ($O_2$ via mask)
**C**irculation (IV access, fluids restricted 80ml/hr)
**D**rugs ($MgSO_4$ loading + maintenance)
**E**valuation (BP control with Hydralazine/Labetalol)
**F**etus (Deliver once maternal stabilization achieved)

## NORMAL LABOR (WHO PARTOGRAPH)

**Stages:**
- **1st (Cervical Dilatation):** Latent ($<$4cm) $\rightarrow$ Active ($4-10$cm, 1cm/hr).
- **2nd (Expulsion):** Full dilatation to delivery of baby. Limits: Nullipara ($<$3h), Multipara ($<$2h).
- **3rd (Placenta):** Delivery of placenta ($<$30 min).
- **4th:** Observation for 2 hours (PPH risk).

**Partograph Action:**
- **Alert Line:** If crossed, reassess, transfer to tertiary care, hydration, rupture membranes.
- **Action Line:** 4 hrs right of Alert. Mandatory intervention (Augmentation or CS).

## MALPOSITION & MALPRESENTATION

**Breech:**
- **ECV (External Cephalic Version):** Attempt at 36-37w. C/I: APH, Previous CS, Twins, Ruptured membranes.
- **Delivery:** Planned CS (safer) OR Assisted Vaginal Breech (Loveset maneuver for arms, M-S-V for head).

**Transverse Lie:**
- ECV if intact membranes.
- Elective CS at 38-39w. If in labor/rupture $\rightarrow$ Emergency CS.

**Occiput Posterior (OP):**
- Wait & Watch (90% rotate).
- Persistent OP: Instrumental delivery or CS.

## EMERGENCY: INTRAPARTUM EMERGENCIES

**1. Cord Prolapse:**
- **Do NOT push cord back.**
- Elevate presenting part (Manual vaginal lift or bladder filling).
- Position: Knee-Chest or Trendelenburg.
- Immediate C-Section.

**2. Shoulder Dystocia (Turtle Sign) - HELPERR:**
- **H**elp (Call pediatrician/anesthesia).
- **E**pisiotomy (Generous).
- **L**egs (McRoberts maneuver: hyperflex hips).
- **P**ressure (Suprapubic pressure - CPR style).
- **E**nter (Rotational maneuvers - Woods screw).
- **R**emove posterior arm.
- **R**oll patient (Gaskin/All-fours).

**3. Uterine Rupture:**
- Signs: Loss of contractions, loss of station, severe pain, hematuria.
- Rx: Resuscitate + Emergency Laparotomy (Repair or Hysterectomy).

**4. Fetal Distress:**
- Left lateral pos $\rightarrow$ $O_2$ $\rightarrow$ Stop Oxytocin $\rightarrow$ IV fluids $\rightarrow$ Delivery.

## PUERPERIUM COMPLICATIONS

**Puerperal Sepsis:**
- Temp $>38^{\circ}$C for $>24$h.
- Inv: High vaginal swab, Blood culture.
- Rx: IV Clindamycin + Gentamicin OR Ceftriaxone + Metronidazole.

**Breast Complications:**
- **Mastitis:** Flucloxacillin, continue feeding.
- **Abscess:** I&D, antibiotics, continue feeding from healthy breast.

## DIABETES IN PREGNANCY

**1. Gestational DM (GDM):**
- **Screening:** OGTT (75g) at 24-28 wks.
- **Criteria:** Fasting $\geq$92, 1hr $\geq$180, 2hr $\geq$153 mg/dl.
- **Rx:** Diet/Exercise (2 weeks). If targets not met $\rightarrow$ Insulin (Drug of choice) or Metformin.
- **Targets:** Fasting $<$95, 1hr PP $<$140, 2hr PP $<$120.

**2. Pre-existing DM:**
- High dose Folate (5mg) preconception (NTD risk).
- Retina/Renal check every trimester.
- **Fetal Surveillance:** Growth scans q4wks (Macrosomia/IUGR).
- **Delivery:** Induction at 38-39w.

**WARNING**

**Postpartum:** Drastic drop in insulin requirement. Risk of maternal hypoglycemia during breastfeeding.

## PROTOCOL: ANEMIA IN PREGNANCY

**Diagnosis:** Hb $<$ 11g/dL (1st/3rd tri), $<$ 10.5 (2nd tri).

**Management Steps:**
- **Mild (9-11 g/dL):** Oral Iron (Ferrous Sulfate 200mg TDS) + Folate.
- **Moderate (7-9 g/dL):** IV Iron Sucrose or Iron Carboxymaltose.
- **Severe ($<$7 g/dL) or $>$36 weeks:** Blood Transfusion (Packed Cells). Give Furosemide to prevent fluid overload.

## HEART DISEASE IN PREGNANCY

**NYHA Classification Mgmt:**
- **Class I-II (No/Mild limit):** Vaginal delivery preferred. Cut short 2nd stage (Forceps/Ventouse) to avoid Valsalva. Antibiotic prophylaxis.
- **Class III-IV (Severe):** MDT approach. Elective CS often preferred + ICU monitoring.

**WARNING**

**Warfarin:** Teratogenic (Chondrodysplasia punctata) in 1st Tri. Switch to LMWH at 6-12 weeks and near term.

## THYROID DISORDERS

- **Hypothyroid:** Increase Thyroxine dose by 25-50% in pregnancy. Target TSH $<$ 2.5.
- **Hyperthyroid:** PTU (1st Tri) $\rightarrow$ Carbimazole (2nd/3rd Tri). Avoid Radio-iodine.

## EMERGENCY: ECTOPIC PREGNANCY

**Clinical Triad:** Amenorrhea, Abdominal Pain, PV Bleeding.

**1. Unruptured (Stable):**
- **Medical (Methotrexate IM):** If Sac $<$3.5cm, no cardiac activity, $\beta$-hCG $<$5000, hemodynamically stable.
- **Surgical (Laparoscopy):** Salpingostomy (preserve tube) or Salpingectomy.

**2. Ruptured (Shock/Peritonism):**
- **IMMEDIATE:** Resuscitation (IV Fluids/Blood) + Emergency Laparotomy (Salpingectomy).

**Dx Algorithm:**
- Urine Preg Test (+) $\rightarrow$ TVS.
- If uterus empty + $\beta$-hCG $>$1500-2000 $\rightarrow$ Likely Ectopic.

## ABORTION & MTP

**Types:**
- **Threatened:** Os closed, live fetus. Rx: Bed rest + Progesterone.
- **Incomplete:** Os open, RPOCs present. Rx: MVA or Suction Evacuation. Misoprostol 600mcg PO.
- **Septic:** High fever, foul discharge. Rx: IV Antibiotics (Triple regimen) $\rightarrow$ Evacuation once stable.

**Medical Termination (MTP):**
- $<$7-9 Weeks: Mifepristone 200mg PO $\rightarrow$ (24-48h later) Misoprostol 800mcg Vaginal/Buccal.
- $>$12 Weeks: Misoprostol cycles / Mechanical dilation.

## GYNAECOLOGY EMERGENCIES

**1. Ovarian Torsion:**
- Acute severe unilat pain + nausea.
- Dx: USG Doppler (Whirlpool sign).
- Rx: Laparoscopic detorsion (conserving ovary) +/- Cystectomy. Oophorectomy only if necrotic.

**2. Ruptured Hemorrhagic Cyst:**
- Mittelschmerz hx.
- Rx: Conservative (Analgesia/Fluids) if stable. Surgery if ongoing bleed/shock.

**3. Acute PID:**
- Outpatient: IM Ceftriaxone + PO Doxy + PO Metro.
- Inpatient (Severe/Abscess): IV Cefoxitin + Doxy OR Clinda + Gent.

## OBSTETRICS & GYNAECOLOGY DIAGNOSTIC ALGORITHMS

| CONDITION | SCREENING / 1ST LINE TEST | GOLD STANDARD / IOC |
|---|---|---|
| **Ectopic Pregnancy** | TVS + Serum $\beta$-hCG (Discriminatory zone $>$1500) | Laparoscopy (Direct visualization) |
| **Placenta Previa** | Transabdominal USG | Transvaginal USG (Safe & Accurate) |
| **Placental Abruption** | Clinical (Pain, hypertonus) + USG (Retroplacental clot) | MRI (if stable/diagnosis unclear) |
| **IUGR (Growth Restriction)** | Symphysis-Fundal Height (SFH) $\rightarrow$ USG Biometry | Doppler USG (UA PI $> 95\%$, MCA sparing) |
| **PPROM** | Sterile Speculum (Pooling) + Nitrazine Test (Blue) | Amnisure / Amniocentesis (Dye instillation) |
| **Pre-Eclampsia** | Urine Dipstick / Spot Protein:Creatinine | 24-Hour Urine Protein ($>$300mg) |
| **Gestational Diabetes** | Glucose Challenge Test (GCT - 50g non-fasting) | OGTT (75g - Fasting, 1hr, 2hr) |
| **Fetal Anomalies** | T1: Nuchal Translucency / T2: Anomaly Scan (18-20w) | Karyotyping (Amniocentesis / CVS) |
| **Pulmonary Embolism** | CXR + ECG (S1Q3T3) + ABG | CT Pulmonary Angiography (CTPA) |
| **Cervical Cancer** | Pap Smear (Cytology) / HPV DNA | Colposcopy guided Biopsy |
| **Endometrial Cancer** | Transvaginal USG (ET $>$4mm in post-meno) | Hysteroscopy + Biopsy |
| **Ovarian Mass** | TVS + CA-125 | Histopathology (Staging Laparotomy) |
| **Endometriosis** | Clinical Hx + TVS (Ground glass endometrioma) | Laparoscopy (Powder burn lesions) |
| **Tubal Patency** | Hysterosalpingography (HSG) - Screening | Laparoscopy + Dye Test (Chromopertubation) |
| **PCOS** | Rotterdam Criteria (2 out of 3) | Biochemical (Free Testosterone) + USG |
| **Vesico-Vaginal Fistula** | Three Swab Test (Methylene Blue) | Cystoscopy |

## PROTOCOL: TUMOR MARKERS CHEATSHEET

- **Epithelial Ovarian CA:** CA-125
- **Mucinous Ovarian CA:** CEA, CA 19-9
- **Dysgerminoma:** LDH, hCG
- **Yolk Sac Tumor:** AFP (Alpha-fetoprotein)
- **Choriocarcinoma:** $\beta$-hCG
- **Granulosa Cell Tumor:** Inhibin B

## ANTIBIOTIC PROPHYLAXIS (SURGERY)

- **C-Section:** Cefazolin 1-2g IV (30 mins before skin incision).
- **Hysterectomy:** Cefazolin + Metronidazole.
- **MVA/D&C:** Doxycycline 100mg PO or Azithromycin.