Hep B, HIV & GBS

VERTICAL TRANSMISSION • VIRAL LOADS • PROPHYLAXIS **KMU - FINAL YEAR MBBS**

1. HEPATITIS B

Transmission: Vertical (at birth) is most common.
Infectivity Markers:
• **HBsAg:** Active infection.
• **HBeAg:** High viral replication (Highly Infectious - 90% transmission risk).

🚨 **BABY MANAGEMENT PROTOCOL**
Goal: Prevent carrier state (90% become carriers if untreated).

Scenario A: Low Risk Mom (HBsAg+, HBeAg-)
• Vaccine ONLY (At birth, 1m, 6m).

Scenario B: High Risk Mom (HBeAg+ or High Load)
• Vaccine + HBIG (Immunoglobulin) within 24 hours.

Breastfeeding: Safe IF baby is vaccinated.

2. GROUP B STREPTOCOCCUS (GBS)

Significance: #1 cause of Neonatal Sepsis/Meningitis.
Colonization: Rectum/Vagina (Transient). Not an STD.

Indications for IAP (Intrapartum Antibiotic Prophylaxis):
1. Previous baby with GBS disease.
2. GBS Bacteriuria (UTI) in *this* pregnancy.
3. Swab Positive in *this* pregnancy.
4. Maternal Pyrexia (>38°C) in labour.
5. Preterm Labour (<37w).
6. Prolonged Rupture of Membranes (>18 hours).

Drug of Choice: IV Benzylpenicillin (3g Loading -> 1.5g 4hrly).
Allergy: Clindamycin or Vancomycin.

3. HIV IN PREGNANCY

Goal: Reduce transmission from 25% -> <1%.
Management Pillars:
1. **HAART:** Start ASAP (even in 1st Tri).
2. **Delivery Mode:** Depends on Viral Load at 36 weeks.
3. **Infant Prophylaxis:** Zidovudine for 4 weeks.
4. **Breastfeeding:** Avoid (in developed world).

4. DELIVERY MODE (THE VIRAL LOAD RULE)

Viral Load (at 36w)	Mode of Delivery	Zidovudine IV?
< 50 copies/ml	**Vaginal Delivery**	No
50 - 399 copies/ml	**C-Section** (Considered)	Yes
> 400 copies/ml	**Elective C-Section**	**YES (Mandatory)**

5. HEP C

• **Transmission:** Vertical (3-5%). Higher if HIV co-infected.
• **Management:** No vaccine. No PEP.
• **C-Section:** Does NOT reduce risk (Vaginal allowed).
• **Breastfeeding:** Allowed (Avoid if nipples cracked/bleeding).

Rubella, Varicella & CMV

CONGENITAL SYNDROMES • EXPOSURE ALGORITHMS **KMU - FINAL YEAR MBBS**

1. RUBELLA (GERMAN MEASLES)

Highest Risk: < 12 weeks (90% transmission).
Lowest Risk: > 20 weeks (Rare damage).
Prevention: MMR Vaccine (Live - Contraindicated IN pregnancy). Avoid pregnancy for 1 month after jab.

🚨 **CONGENITAL RUBELLA SYNDROME (CRS)**
Classic Triad:
1. Sensorineural Deafness (Most common).
2. Eye Defects: Cataracts ("Salt & Pepper" Retinopathy).
3. Cardiac Defects: PDA (Patent Ductus Arteriosus).

Skin: "Blueberry Muffin" rash.

2. CYTOMEGALOVIRUS (CMV)

Epidemiology: Most common congenital infection.
Features:
• IUGR (Growth restriction).
• Microcephaly.
• **Periventricular Calcifications** (Brain).
• Sensorineural Hearing Loss.
Diagnosis: Amniocentesis (PCR) at >20 weeks.
Treatment: No vaccine. No effective treatment during pregnancy.

3. VARICELLA ZOSTER (CHICKENPOX)

Maternal Risk: Varicella Pneumonia (High mortality).
Fetal Risk: Depends on Timing.

1. Fetal Varicella Syndrome (FVS):
• Infection **< 20 Weeks**.
• Features: Skin scarring (Dermatomal), Limb hypoplasia, Microcephaly.

2. Neonatal Varicella:
• Infection near delivery (5 days before - 2 days after).
• **Dangerous:** Baby has no antibodies. Severe disseminated disease.

4. VARICELLA EXPOSURE MANAGEMENT

Scenario	Action
Immune (Past history / IgG +ve)	Reassure. No action.
Non-Immune (Exposure < 20w)	Give **VZIG** (Immunoglobulin) ASAP (up to 10 days).
Non-Immune (Exposure > 20w)	Give **VZIG** or Acyclovir (7 days post exposure).
Maternal Chickenpox	Give **Oral Acyclovir** immediately (<24h of rash). Refer to hospital if chest symptoms.

5. PARVOVIRUS B19 (SLAPPED CHEEK)

• **Target:** Attacks Fetal RBC precursors.
• **Result:** Severe Fetal Anemia -> **Hydrops Fetalis**.
• **Diagnosis:** MCA Doppler (High velocity = Anemia).
• **Treatment:** Intrauterine Transfusion.