CONGENITAL HEART DISEASES II

(DICTATED NOTES)

HISTORY TAKING

- Take the maternal and intra-partum history
  - Exposure of mother to teratogens

- Anything that interferes with placental blood flow will cause congenital malformations
  - Polyhydramnios or Oligohydramnios
    - Predispose to congenital heart malformations
  - Severe High Fever in the first three months of pregnancy
    - Predisposition to lesions that obstruct the flow of blood e.g. pulmonary stenosis
  - Infections in the first trimester e.g. TORCHEs
    - Characteristic heart malformations
    - In Rubella infection there is a high likelihood for development of Pulmonary Stenosis and PDA.

CONT.

- Gestational Diabetes or uncontrolled blood sugar
  - Predisposition to **Transposition of the Great Arteries** and **hypertrophic cardiomyopathy**
  - The neonates have very high birth weights e.g. 4kg
- SLE
  - Predisposition to **congenital bradycardia or complete heart block**
- Severe PET
  - Affects blood flow through the placenta
- Epilepsy and Anti-epileptic drugs
  - Predisposition to pulmonary stenosis

CONT.

- Post-partum
  - Infants with congenital heart malformations tend to have **low APGAR scores.**
  - Affected infants also have **intra-uterine growth retardation** and are therefore usually **small for age**; probe for weight at birth.
  - Query for normal activities like crying, feeding, passing stool etc.
    - Affected infants have feeding difficulties (they get tired, sweaty, cyanotic or even have DIB as they feed thus they stop feeding)
    - They have poor growth
    - They have delayed developmental milestones
  - DIB worsened by scanty feeding is common in affected children.

CONT.

- In childhood:
  - Chest pains, DIB and syncope on exertion
  - Easy fatigability
  - Squatting back in tetralogy of Fallot (Fallot's sign in Fallot spells)
  - Body swelling

CONT.

- Family history
  - Cardiac disease in the siblings and the extended family
  - Consanguinity

EXAMINATION

- General examination
  - General impression
    - Lethargic and withdrawn
  - Pallor or plethoric
    - Plethora is seen in Superior Vena Cava obstruction
  - Jaundice
    - Predisposition to infective endocarditis
  - Edema
  - Cyanosis
  - Finger clubbing
  - Nutritional state
    - Wasted; small for age (Septal Defects, severe obstruction of flow)

CONT.

- CVS examination
  - **Pulses**
    - Rate – tachycardia
      - In Coarctation of the aorta there is **radio-femoral delay**
    - Volume – low volume pulse in obstructive malformations; high volume pulse in PDA
  - **Blood Pressure**

CONT.

- **Precordium** (the left side of the chest **EXCEPT** in Dextro-cardia).
  - Inspection
    - Shape and obvious bulges; pigeon chest (increased anterior diameter); barrel chest (increased lateral diameter); hyperactive precordium; sternotomy scars (open heart surgery); thoracotomy scars; traditional therapeutic marks/scars; chest motion with respiration.
  - Palpate
    - Apex beat (the point of maximum, outer-most, lower-most cardiac activity)
      - Heaving apex
      - Parasternal heave
      - Thrill (palpable murmur)
  - Percussion

CONT.

- Auscultation
  - Heart sounds
    - Especially S2 which is normal in **VSD**; it is increased in **Eisenmenger syndrome (pulmonary HTN)**, **Tetralogy of Fallot** and **Transposition of the Great Arteries**; it is inaudible in **pulmonary stenosis**; It is split in **ASD**.
      - ***Distinguish Eisenmenger syndrome from Eisenmenger complex***

CONT.

- Murmurs
  - Systolic murmur (from S1 to S2)
    - With the same intensity – **pansystolic/holosystolic murmur** – seen in VSD
    - Increases with intensity then disappears at the ends (diamond-shaped; crescendo-decrescendo) – **Ejection Systolic Murmur** – seen in Pulmonary stenosis, Aortic stenosis (left sternal border); low volume pulses.
  - Diastolic murmur (from S2 to S1)
  - Continuous murmur (from S1 through S2 and back to S1)
    - Seen in PDA; in the left upper sternal border; associated with high volume pulses

Continuous machinery murmur
Late systolic accentuation
Maximal at the second left intercostal space below the clavicle
Associated with thrills
Increased pulse volume

CONT.

- Abdominal Examination
  - Hepatomegaly

- Respiratory Examination

INVESTIGATIONS

- ECG
- Echocardiography
- Cardiac catheterization

END

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