PEDIATRIC CASES
CASE 1

Last images
CASE 1: Achondroplasia

- Rhizomelic shortening
- Bowing of limbs
- Enlarged cranium/ frontal bossing
- Decreased interpediccular distance
- Posterior scalloping
- Short/broad ribs
- Sacroiliac notches/ champagne glass inlet
- Trident hand / short, “stubby” fingers
CASE 2: Meconium Aspiration

- Areas of air-trapping (hyperaeration), atelectasis and course nodular opacities
- Pneumothorax
- Pneumomediastinum
- DDx: neonatal pneumonia, hmd, ttn
CASE 3 : Neuroblastoma

• Paraspinal mass
CASE 4
CASE 4: Intussusception

- 90% occur in first 2 years of life
- Look for lead point in older patients (lymphoma) or neonates (Meckel’s)
- 90% ileocolic
CASE 4: Intussusception
Operation plots of an intussusception. The small intestine (blue arrow) is going inside the large intestine (green arrow).
CASE 5 : Congenital Lobar Emphysema

- Progressive overdistention of a lobe due to bronchial cartilage anomaly or external compression
- Males >>> females
- 2/3 in upper lobes; L>R
- 15% with vsd or pda
- May contain fluid in neonates
- DDx: FB aspiration, pneumothorax, Swyer-James, lung hypoplasia, CCAM
CASE 5: Congenital Lobar Emphysema
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CASE 6
CASE 6: Turner’s Syndrome

• 15% with Coarctation (VSD, bicuspid aortic valve, circle of Willis aneurysms), reverse 3 vs. 3

• Short 4\textsuperscript{th} metacarpal (DDx: pseudohyppoparathyrodisim)
CASE 7: Lead poisoning

- DENSE METAPHYSICAL BANDS
- DDx: Physiologic sclerosis
CASE 8: lissencphaly (agyria)

- Hypoplasia of the brain with lack of formation of cerebral sulci/gyri due to failure of neuronal migration
CASE 9: rickets

- Widening of the physis, metaphyseal cupping & fraying
- Generalized osteomalacia
- Rachitic rosary
CASE 10: Osteogenesis Imperfecta

• Faulty collagen formation
• Thin, brittle bones with repeated fractures which heal with exuberant callous and bowing
• Epiphyseal enlargement
• Osteomalacia
• Wormian bones
CASE 11: congenital hip dysplasia

Shentons line: should curve from lesser trochanter to obturator foramen

Acetabular angle
nl<30
CASE 12

Tc-99m sulfur colloid
CASE 12 : GAUCHERS

- Lipid storage disease
- Hepatospleenomegaly
- Bone Marrow MRI (expansion of marrow):
  - Quiescent: Hypointense T1 & T2
  - Active: Hyperintense T2
- Erylenmeyer Flask (metaphyseal widening):
  - Anemias, mucopolysachridoses, osteopetrosis, metaphyseal dysplasia
CASE 13
CASE 13: Mesoblastic Nephroma

- Fetal renal hamartoma
- Most common solid renal mass in neonatal period
- DDx: Wilms Tumor
CASE 15: Hemangioendothelioma

- Most common liver tumor in first year of life
- CHF, Kasabach-Meritt, DIC, 40% with cutaneous angiomas
- Fast flow, solid, speckled calcification
- Enlarged celiac with distal small aorta
- DDx: hamartoma (multilocular cysts), hepatoblastoma (+AFP), sarcoma
Case 16
Case 16: CHILD ABUSE: subdural hematoma

- **Differential Diagnosis:**
  - Old subdural hematomas, child abuse should be considered
  - Acute phase of bacterial meningitis
Case 18: leukemia

- DDx for metaphyseal lucent bands:
  - Leukemia
  - Infection (syphilis, TORCH)
  - Neuroblastoma
  - Endocrine (rickets, hypophosphatemia)
  - Scurvey

- DDx for diffuse periostitis:
  - Leukemia (Infiltration of subperiosteal spaces lifts the periosteum and stimulates bone formation 81)
  - SCALP (scurvey, caffey, accident, a-vitamin, leukemia, lues, prostaglandin, phsiologic)
PERIOSTEAL SOCKS

- Physiologic, prostaglandin
- EG
- Rickets
- Infantile cortical hyperostosis (Caffey's)
- Osteomyelitis
- Scurvey
- Trauma
- Ewings
- A-hypervitaminosis
- Leukemia and cancers (neuroblastoma)
- Syphilis
- Osteosarcoma
- Child Abuse
- Kinky Hair syndrome
- Sickle cell Dz
Case 19: Rubella

• “Celery Stalk”
  – TORCH
Case 21 : Right Aortic Arch

• With Mirror image (98% with CHD)
  – TOF, truncus arteriosusus, multiple defects

• With aberrant retroesophageal Left subclavian a. (2% with CHD)

• Double Arch: CHD rare; tracheomalacia