Haemangioma of Infancy

- **Natural history:**
  - Not present at birth
  - More prominent days to weeks after birth
    - Proliferate over ~6 months
    - Most growth complete by 4mo
  - Involution at 9-12 months
  - Residual fibrofatty tissue after involution
  - Can cause significant complications

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Hemangioma of Infancy

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ISSVA Classification

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<th>Tumours</th>
<th>Malformations</th>
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International Society for the Study of Vascular Anomalies

Science Committee of the Scientific Meeting of International Society for the Study of Vascular Anomalies (ISSVA), Rome, Italy 1996.
Vascular Malformation
- Present at birth
- Usually grow in proportion to child
- Never regress

Capillary Malformations
(Old term: Port wine stain)
Venous Malformations

Complications

- STP → DVT → PE
  - When extensive positive d-dimers
- Involve important structures
  - Airways
  - Eyes → extension to brain
  - Perineum
  - Intra-articular
- Chronic venous hypertension → LDS → Ulcers
- Limb hypertrophy

Venous Malformations

- **Truncular**
  - IVC Anomalies
  - Primary venous aneurysms
- **Extra-truncular**
  - Intra-dermal
  - SC fat
  - Intra-muscular
  - Intra-articular
  - Deep within other organs
Phlebectatic Venous Malformations

- Blue Rubber Bleb (BRB) Syndrome
  - Inherited AD
  - Multiple VM
  - DD of GVM
  - GI Lesions
    - Bleed causing Fe def
    - GI infarction
  - Spontaneous thrombosis
  - Other organs involved:
    - Brain, heart, lung, nasopharynx

Maffucci Syndrome
- VM, AVM
- Enchondromas
- Bony abnormalities
  - Usually asymmetric
  - Cause secondary fractures
Glomovenous Malformations

- Arise from glomus cells (Smooth m. origin)

- Glomus bodies
  - AV shunts located acrally
  - Thermoregulatory receptors
Pre and Post Sclerotherapy

Lymphatic Malformations

- **Truncular**
  - Presents as primary lymphodema

- **Extra-truncular**
  - Macrocystic
  - Microsystic

Lymphatic Malformations

- **Cutaneous complications**
  - Lymphoedema
  - Papillomatosis
  - Infection
  - Bleeding
  - Thrombosed lesions
Stage 1 AVM

Stage 2 AVM

Stage 3 AVM
AVM
- Chronic Aorta-Caval fistulae
  - Bilateral severe ‘varicose veins’
  - Arterial flow in veins
  - ‘Machinery’ abdominal murmur
  - Abdominal pain, haematuria

- May lead to
  - Limb/tissue hypertrophy
  - Tachycardia
  - Skin atrophy, ulceration

Complex Malformations
- Klippel Trenaunay Syndrome
  - C + V + L

- Parkes Weber Syndrome
  - C + V + A + L

KTS
- Commonly presents as ‘varicose veins’
- Present at birth
- Usually unilateral
- Single limb
- An arm and a leg on the same side
Parkes Weber Syndrome
CLAVM

QUIZ

» Guess the malformation from the ultrasound images
Vascular Malformations

- Normal structures; abnormal function
- Error of morphogenesis (4th-10th week)
- Not present at birth
- Grow proportionately to the child
- 90% involute by the age of 9

Doppler Findings

- High Flow lesions
  - Haemangiomas
  - Venous
  - AVM
  - Lymphatic
  - AVF
  - Capillary
Pre and Post UGS
Vascular Anomalies: When the vascular system is compromised

Dr Kourosh Parsi
Sydney Children’s Hospital