Treatment of infantile haemangiomas

Who, when, why and how

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Conflicts of interest

- Galderma: sponsored meeting attendance, education scholarship and honoraria
- Nutricia: sponsored meeting attendance and honoraria
- Pierre-Fabre: sponsored research
- Johnson and Johnson: medical advisor
Classification of vascular anomalies (ISSVA)

- **Vascular tumours**
  - Benign
    - Infantile haemangioma
    - Congenital haemangioma
      - RICH, NICH, PICH
    - Tufted angioma…
  - Borderline
    - Kaposiform haemangioendothelioma
    - Kaposi sarcoma…
  - Malignant
    - Angiosarcoma…

- **Vascular malformations**
  - Simple
    - Capillary malformation (PWS)
    - Venous malformation
    - Lymphatic malformation
    - Arterial malformation
  - Combined
    - AVF, AVM, CVM, CLVM, LVM, CAVM, CLAVM
  - Associated with other anomalies
    - Sturge Weber, Klippel Trenaunay, Parkes Weber, Proteus, CLOVES…
Infantile haemangioma

- Benign vascular tumors
- Affect 2-5% of infants
- Not present at the time of birth
- Characterised by rapid postnatal growth
  - 80% growth occurs by 3 months of age
- Followed by spontaneous regression
  - Most regression occurs by 3.5 years of age
- Approximately 10% may cause complications
Complications of infantile haemangiomas

- Obstruction of vision/airway
- Ulceration
- Pressure effects on cartilage
- Stretching of soft tissues
- Telangectasia
- Fibrofatty tissue residua
PHACES syndrome

- Posterior fossa brain abnormalities
- Segmental Haemangioma of the head/neck
- Arterial abnormalities
- Coarctation of aorta
- Eye abnormalities
- Sternum abnormalities

- Present in 31% of infants with a segmental IH of the head/neck >22cm
Haemangiomatosis

- >5 infantile haemangiomas
- May be disseminated eg intrahepatic, intracranial
- Risk of cardiac failure, hyperthyroidism
Propranolol for infantile haemangiomas

- Leaute-Lebreze et al
- *Pediatrics* 2008
- Propranolol 2mg/kg/day

- Supported by case series and RCT
- More effective than corticosteroids
- Atenolol, nadolol, topical timolol also seem effective
6 months
Without treatment
11 months
Propranolol – unwanted effects

- Bradycardia and hypotension
  - Maximal 1-3 hours post-dose
- Hypoglycaemia
  - Unpredictable – routine screening not advised
  - Advise discontinue with intercurrent illness or reduced oral intake
- Cool peripheries
- Altered sleep
- Neurodevelopment to 5 years normal

- Initiation in paediatric daystay or hospital setting
  - Cardiovascular examination, BP, +/- ECG
When to treat haemangiomas

- Airway compromise
  - Subglottic, nasal, intraoral
- Visual axis
  - Intraorbital, eyelid
- Ulcerated
  - Perineal, lip, segmental, flexural
- Risk of permanent significant cosmetic defect
  - Nasal tip, lip, ear, face, etc
- Haemangiomatosis
  - Disseminated lesions – intrahepatic, intracranial...

- Treatment is most effective if commenced before 8 weeks of age
When to refer infantile haemangiomas

• When you think beta blockers may be indicated
  – in the airway or affecting visual axis
  – ulcerated
  – on the face/anterior neck
  – in the nappy area

• When investigation may be needed
  – Segmental haemangioma
  – Multiple >5 haemangiomas

• When there is doubt about the diagnosis
  – Present on the day of birth
  – Onset after first weeks of life
  – Atypical appearance or growth trajectory
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