Subglottic Haemangioma

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History, pathology and epidemiology

• First described by Morell Mackenzie in 1864
• Caucasian preponderance
• Twice as common in females
• ? Hormonal
• cavernous ↔ capillary spectrum
Association of SGH with cutaneous

• 50% of patients with SGH have associated head and neck cutaneous haemangioma
• ? What percentage of those with cutaneous have SGH? (and of those with stridor?)
Site

• Usual site is left lateral subglottis
  why?

• Occasionally in glottis and trachea
Presentation

• Presentation peaks at 6 weeks
  – ?hormonal

• stridor, “recurrent croup”

• feeding difficulties, FTT

• Unusual; 60 @GOS in 15 years
Diagnosis

• Diagnosis at endoscopy

• Can be biopsied safely as capillary not cavernous haemangioma
Natural History

• Regression

  – *Cutaneous* usually regress by 6-8 years

  – *Subglottic* involute sufficiently so that most are asymptomatic by 2-3 years
Management

• Observation
  – 50 - 70% will need a tracheostomy until about 18 months

• Medical treatments

• Surgical treatments
  to avoid tracheostomy
Medical management

• **Systemic steroids**
  
  – Sufficiently high dose (1mg/kg prednisolone) to cause side effects and risks of steroid therapy? Alternate days
  
  – Requires advice and support of paediatric endocrinologist
Medical management

- **Interferon alfa-2a**
  - antiviral
  - noted to improve Kaposi’s sarcoma in patients with AIDS
  - some promising results over a prolonged period of administration
  - well recognised reversible side effects
Medical management

• Propanolol
  – first noted in Bordeaux in patient with obstructive cardiomyopathy and nasal haemangioma – lesion regressed on propanolol
First GOS patient: SGH, trachy after debulk, July 2008
First GOS patient: endoscopy

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Surgical management

• Tracheostomy
• Laser
• Steroid injection
• Open excision
Surgical management

• Tracheostomy
  – 0-4% mortality
  – social and family issues
  – speech language delay
  – suprastomal collapse
  – *but*
  – should resolve without stenosis
Surgical management

• Laser
  – CO$_2$
    • precise, shallow penetration
  – KTP
    • absorbed by red haemoglobin pigment

• BOTH HAVE RISK OF STENOSIS AND DO NOT HASTEN DECANNULATION

A review of the current management of infantile subglottic haemangioma, including a comparison of CO(2) laser therapy versus tracheostomy. Bailey, Albert et al 2002
Surgical management

- Injection of steroids
  - Dexamethasone/Triamcinalone
  - Often multiple injections needed
  - Intubation required post injection
  - Fails if there is an extra tracheal component
Surgical management

• Open excision
  – Mawson 1961 (King’s college Hospital)
    • some stenosis
  – Evans 1974 (GOS) combined with LTP

– Garabedian/Froehlich 1990’s
  • submucosal resection combined with grafting to reduce risk of stenosis
Open excision
Endoscopic excision
GOS Experience

• Subglottic haemangioma
  • 25 cases in last 5 years

• Tracheal Haemangioma
  • 2 cases
Case LG

• Systemic Steroids
• No tracheostomy
• Quite cushingoid but normal synacten test
Case BT

• 4 steroid injections
• Required tracheostomy
• then open resection
Case AB

- Tracheostomy at 4 months
- Decannulated at 18/12
- TCF closed at 2 ½ years
Case SA

• 2 x injections
  - failed

• open excision as single stage
  - successful
GOS management

• Small lesions
  – Observe
  – Occasional limited CO$_2$ laser
  – Short courses of steroids
GOS management

- Large/circumferential lesions
  - Propanalol
  - Primary excision
  - Open
  - Endoscopic
  - Tracheostomy