Eyelid Hemangioma

Case Description
2-month-old infant has been brought for evaluation of an enlarging reddish lump on her left upper lid

Image Description

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external photograph shows reddish-blue mass of left upper lid

Differential Diagnosis
- eyelid hemangioma
  - risk factors
    - female
    - low birth weight
    - prematurity
    - maternal chorionic villus sampling
  - natural course
    - present at birth or in the first few weeks of life
    - enlarge dramatically over 6–12 months
    - involute after the first year of life → 75% resolve during the first 3–7 years
  - ± hemangiomas of other parts of the body
    - lesions involving neck can compromise airway
    - multiple large visceral lesions can produce thrombocytopenia → Kasabach-Merritt syndrome
- lymphangioma
- preseptal cellulitis
- port-wine stain

Data acquisition
- History
  - onset & course — see old photos
  - change in lesion size/ appearance with crying
- Physical Exam
  - VA
  - APD
  - lid position — blocking visual axis
  - head position — chin-up
  - proptosis
  - extraocular motility/alignment
  - dilated fundus exam
  - cycloplegic refraction — astigmatism
  - warmth/tenderness, fever → preseptal cellulitis
  - hemangiomas elsewhere in the body

Additional Testing
- orbital imaging
  - indications
    - proptosis
    - limitation of extraocular motility/strabismus
    - optic neuropathy

Assessment
- eyelid hemangioma

Treatment
- indications for treatment
  - cause amblyopia
    - occlusion of the visual axis (severe ptosis)
    - anisometropia
    - strabismus
  - significant disfigurement
- methods of treatment
  - observation
    - defer treatment until it is clear that the natural course will not lead to the desired result
    - refractive correction
    - amblyopia therapy
  - beta-blockers
    - first line of treatment
    - for superficial tumors — topical timolol gel
    - for larger and deeper lesions — oral propranolol
    - fewer adverse effects than systemic steroids
      - bradycardia
      - hypoglycemia
  - steroids
    - for lesions unresponsive to β-blockers
    - growth retardation — systemic steroid
    - intralesional steroid
      - skin necrosis
      - subcutaneous fat atrophy
      - growth retardation
      - CRAO
  - excision
    - for nodular lesions that are smaller, subcutaneous, or refractory to medical treatment
  - radiation therapy
    - complications
      - cataract formation
      - bony hypoplasia
      - future malignancy
  - pulsed-dye laser therapy
    - superficial components of the hemangioma
  - sclerosing solutions
    - not recommended ! ⊘ — severe scarring

Patient Education/ Counselling
- Disease course
  - enlargement during the first year
  - spontaneous resolution after a few years (4 years)
- Prognosis
  - good if amblyopia prevented/treated
- Complications
  - amblyopia
    - ptosis
    - astigmatism
    - strabismus

Ophthalmology Mind Maps/Arman Mashayekhi, MD