ORBITAL CELLULITIS AND SINUSITIS ● 1/2

RECOGNITION AND ASSESSMENT

Orbital cellulitis is an ophthalmic emergency that can cause sight-financing or life-threatening complications

- Fever
- Level of consciousness
- Headache
- History
  - sinusitis
  - upper respiratory tract
  - dental infection
- Eye problems: sty, chalazion, dacryocystitis, trauma or recent surgery
- Vaccinations (especially Hib)
- Comorbidities (e.g. immunocompromised, diabetes)

Table: Distinguishing orbital from preseptal cellulitis

Preseptal	Orbital
Eye can be examined	Unable to examine eye
Facial erythema and tenderness	Painful eye movements or ophthalmoplegia
Normal eye movements	Orbital pain and tenderness
Normal vision	Visual impairment (red-green colour differentiation lost early)
Preceding superficial trauma	Preceding sinusitis
Eye pain	Proptosis, chemosis, pupil* or fundi abnormality
Periorbital swelling	Decreased GCS, headaches
Fever	Systemically unwell (toxic)

* including relative afferent pupillary defect

- If uncertain, manage as orbital cellulitis pending CT and ophthalmologist review

Investigations

- Eye swab (send pus if present)
- FBC
- Blood culture
- CT scan if:
  - orbital involvement suspected
  - central neurological signs
  - unable to assess eye movements/vision or if eyelid cannot be opened
  - bilateral oedema
  - deterioration despite treatment
- MRI if neurological signs or suspicion/evidence of intracranial involvement on CT

MANAGEMENT

Preseptal peri-orbital cellulitis

- If limited to upper eyelid oral co-amoxiclav
- Review eye movements and red-green colour vision twice daily
- If both eyelids, severe or no improvement after 48 hr, give IV co-amoxiclav
  - if improving, convert to oral high dose co-amoxiclav
  - if penicillin allergy, give clindamycin
- Total duration of treatment
  - non-severe 5 days
  - severe (including IV) 7 days

Orbital cellulitis

- Urgent ophthalmology/ENT review within 4 hr for assessment for surgical drainage
- IV ceftriaxone 100 mg/kg maximum 2 g (or cefotaxime 50 mg/kg maximum 3 g if ceftriaxone contra-indicated)
- If toxaemic, add clindamycin 6.25–10 mg/kg 6-hrly
- If history of anaphylaxis to penicillin, give ciprofloxacin and clindamycin
- If improving, convert to oral high dose co-amoxiclav
- If penicillin allergy, give clindamycin

ORBITAL CELLULITIS AND SINUSITIS ● 2/2

- Total duration of treatment (including IV) 21 days (up to 6 weeks if bone involvement)

Intracerebral complications
- Urgent neurosurgical review

Sinusitis
- URTI symptoms ≥10 days and ≥1 of:
- nasal congestion and discharge
- persistent cough (often nocturnal)
- If acute, treat with amoxicillin
- Change to co-amoxiclav if no response after 48 hr (IV if severe)
- Total 7 days antibiotics
- Severe if:
- falling GCS, temperature >39°C, purulent discharge
- ENT, neurosurgical review
- If complications are present:
- orbital – CT with contrast
- neurological – MRI with contrast
- Plain CT of sinuses for sinusitis
- if stable, can be done as outpatient