Orbital Cellulitis

Orbital cellulitis is inflammation involving the soft tissues of the orbit residing posterior to the orbital septum, typically attributed to infection.

ASSESSMENT

Perform a standard history and physical exam (HPE). In children, there are often simultaneous or antecedent upper respiratory infection or “sinus” symptoms including nasal congestion, facial pain, rhinorrhea and cough.

Attempt to differentiate orbital cellulitis from periorbital (or pre-septal) cellulitis during HPE. Check visual acuity if possible, ocular motility and alignment, and pupils. Proptosis, ocular misalignment or limited normal eye motility suggest orbital cellulitis. If the child appears systematically unwell with fussiness, lack of playfulness and/or is febrile, suspect orbital cellulitis. Palpate and retropulse the globe through closed lids to check for globular softness or tension. A tense orbit demonstrating resistance strongly indicates for an emergency referral.

MANAGEMENT/TREATMENT

If you suspect orbital cellulitis or cannot rule it out, obtain orbital imaging—usually CT with contrast. Consider imaging for systemically ill-appearing patients with ocular and eyelid signs of periorbital cellulitis as well. Empiric oral antibiotics are reasonable for periorbital cellulitis in patients with less severe symptoms.

WHEN TO REFER

Refer patients with orbital cellulitis to Cincinnati Children’s Emergency for pediatric ophthalmology and otolaryngology consultation to facilitate rapid imaging, ophthalmologic exam, labs and IV antibiotics. Patients with orbital cellulitis typically require hospitalization for at least 72 hours.

Tool developed by Cincinnati Children’s physician-hospital organization (known as Tri-State Child Health Services, Inc.) and staff in the James M. Anderson Center for Health Systems Excellence. Developed using expert consensus and informed by Best Evidence Statements, Care Practice Guidelines, and other evidence-based documents as available. For Evidence-Based Care Guidelines and references, see www.cincinnatichildrens.org/evidence.
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**Inclusion Criteria**
- Swollen eyelids

**Patient Presents**

**Standard Workup**
- Patient Medical History
- Family History
- Physical Exam

**Reduced eye motility or proptosis?**
- Yes
  - Refer to Cincinnati Children’s Emergency for imaging, ophthalmology consult and IV antibiotics
- No

**Red conjunctiva?**
- Yes
  - Suspect infectious conjunctivitis
  - Is the patient well-appearing?
    - Yes
      - Consider further outpatient evaluation and management
    - No
  - Suspect periorbital cellulitis
- No
  - Is the patient well-appearing?
    - Yes
      - Consider further outpatient evaluation and management
    - No

For urgent issues, or to speak with the specialist on call 24/7, call the Physician Priority Link® at 1-888-987-7997.