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0196-0644/\$-see front matter

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doi:10.1016/j.annemergmed.2011.06.004



Figure 1. Clinical images depicting the patient's external appearance during his hospital course.

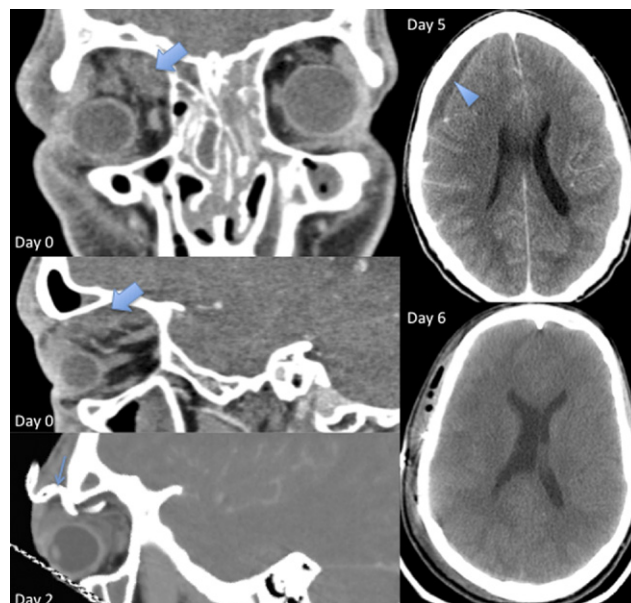


Figure 2. CT of the head and orbits. Used with permission of Seongmu Lee, MD, MD, Cullen Eye Institute, Department of Ophthalmology, Baylor College of Medicine, Houston, TX.

[Ann Emerg Med. 2012;59:156.]

A 21-year-old man presented with several days of fever, sinus pain, decreased vision, and pain with eye movement. Examination revealed proptosis and periorbital edema/erythema, with an afferent pupillary defect and a visual acuity of hand-motion in the right eye (Figure 1). A computed tomography (CT) scan showed opacification of the frontal, ethmoid, and maxillary sinuses bilaterally, with right-sided orbital inflammatory changes and a subperiosteal abscess in the superomedial orbit (Figure 2). The patient began receiving vancomycin, ceftazidime, and metronidazole. He underwent an orbitotomy with subperiosteal abscess drainage and right-sided ethmoidectomy that same day. Abscess cultures grew *Staphylococcus aureus* and *Streptococcus sanguis*. Although the external examination showed apparent improvement, the patient continued to note a lack of appetite, generalized malaise, and intractable headache. Several days thereafter, the patient developed left-sided extremity weakness and altered mental status. A right-sided subdural empyema was identified (Figure 2), requiring an urgent craniotomy. During the following week, the patient recovered dramatically, although vision improved only to counting fingers and mild aphasia remained.

For the diagnosis and teaching points, see page 158.

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Funding and support: By *Annals* policy, all authors are required to disclose any and all commercial, financial, and other relationships in any way related to the subject of this article as per ICMJE conflict of interest guidelines (see www.icmje.org). The authors have stated that no such relationships exist.

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DIAGNOSIS:

Orbital cellulitis. Orbital cellulitis describes an infection involving the soft tissues posterior to the orbital septum and can be associated with severe vision- and life-threatening complications.¹⁻³ Patients with a subperiosteal abscess and associated visual loss may require surgical intervention.³ Attention to constitutional signs is important because these parameters often precede improvements in physical and radiographic findings, which can initially appear worse in the early treatment phase.³ Rapid diagnosis and prompt initiation of therapy is important to minimize complications, although sequelae may occur despite aggressive management.

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