

# Ethmoiditis with subperiosteal and retro-ocular abscesses due to *Aeromonas sobria* in a 16-year-old boy exposed to the Ardèche river

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## DESCRIPTION

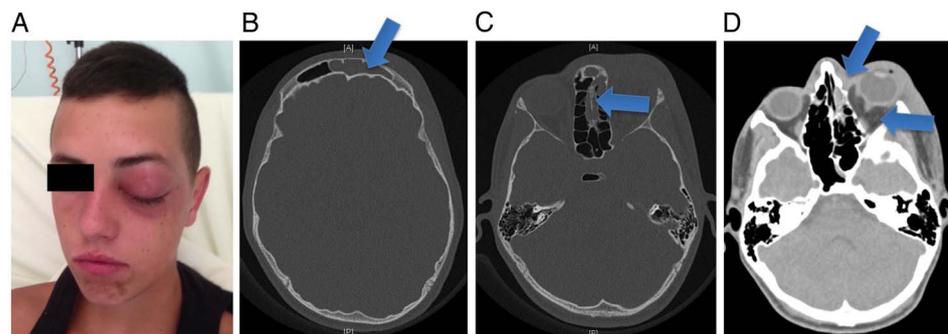
A 16-year-old boy consulted for fever, left eyelid swelling, headache and vomiting. In the previous weeks, he reported having often bathed in the Ardèche river in France and has made many somersaults in jumping in the water. CT scan demonstrated filling of left ethmoid, maxillary and frontal sinuses with left eyelid infiltration and intraorbital extension. The patient was diagnosed with left ethmoiditis and was treated with intravenous amoxicillin–clavulanate. After 5 days of treatment, his fever had subsided but left exophthalmos, proptosis and ophthalmoplegia appeared with light reflex conservation (figure 1A). Fundus examination of the left eye was unremarkable, and dexamethasone and aminocyclitol eye drops were added. A new CT scan was performed that showed an intraorbital and supraocular collection (9×23 mm) with left frontal sinus and left ethmoid opacification (figure 1B–D).

The patient was admitted in our clinic and surgical drainage was performed, which confirmed subperiosteal and intraocular abscesses. After surgery, the patient was treated with a combination of cefotaxime and fosfomicin with dexamethasone eye drops. After few days, clinical and biological evolution was favourable with diminution of eyelid swelling, ophthalmoplegia and inflammatory syndrome. Bacterial culture of the abscess found surprisingly several amounts of *Aeromonas sobria* in culture, and the patient was then treated with ciprofloxacin 500 mg twice a day for 3 weeks. The outcome was favourable.

To the best of our knowledge, we present the first known case of complicated ethmoiditis due to *Aeromonas* species.<sup>1</sup> Ethmoiditis is a common complication of rhinopharyngitis in children. Complicated forms are less frequent and include subperiosteal abscess, which is a form of bone and joint infection, and orbital abscess with exophthalmos, proptosis and ophthalmoplegia.<sup>1–3</sup> The most frequent pathogens identified following surgical drainage are *Staphylococcus aureus*, Streptococci, *Haemophilus influenza* and anaerobes. A surgical drainage followed by intravenous antibiotics is recommended.<sup>1–3</sup> Our case underlines that *Aeromonas* spp. should be listed as an important pathogen in adolescents with complicating ethmoiditis and reporting recently bathing in freshwater rivers.

## Learning points

- ▶ Ethmoiditis can be complicated with subperiosteal and orbital abscess.
- ▶ *Aeromonas* spp. should be listed as an important pathogen in adolescent with complicating ethmoiditis and reporting recently bathing in freshwater rivers.
- ▶ Surgical drainage (to clear out the abscess and identifying the pathogen) and intravenous followed by oral adequate antimicrobial therapy are recommended.



**Figure 1** The 16-year-old boy with complicated ethmoiditis (A); CT scan revealed left frontal sinusitis (arrow, B), left ethmoidal sinusitis (arrow, C) and left subperiosteal and orbital abscesses (arrows, C).



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