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IMAGES IN CLINICAL PRACTICE

BILATERAL EYE SWELLING

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A previously healthy 6-year-old boy was admitted to the emergency department with fever, cervical lymphadenopathy, bilateral eyelid edema and erythema, with almost complete closure of the palpebral fissures, exuberant chemosis and photophobia (Figure 1). He had no recent history of respiratory tract infections, no apparent cutaneous portal of entry or contact with someone with similar symptoms. On physical examination, pupils were equally round and reactive to light, but the evaluation of extraocular muscle movements and visual field testing were not possible due to eyelid edema. Computed tomography (CT) of the orbits and sinuses revealed bilateral enlargement of lacrimal glands (Figure 2). Treatment with systemic amoxicillin + clavulanic acid and topical prednisolone and chloramphenicol was started, and he was regularly observed by an ophthalmologist. He responded well to treatment and resolution of eyelid edema, conjunctival pseudomembranes were observed. Serological studies were consistent with acute adenovirus infection (positive IgM/ negative IgG antibodies) and past *Epstein-Barr virus* (EBV) infection (positive viral capsid antigen (VCA) IgG antibodies; negative VCA IgM antibodies; positive EBV nuclear antigen (EBNA)1 IgG antibodies). The patient had a full recovery and remained well two years later.

What is the diagnosis?

Dacryoadenitis. It is the inflammation of the lacrimal gland, rarely bilateral, which may be due to infectious, inflammatory or autoimmune causes, or it may be idiopathic.[1] In children it usually has a viral etiology, most frequently attributed to *Epstein-barr virus* and rarely to *Adenovirus*.[2] Acute adenovirus infection seems the likely etiology in our patient.

Clinical manifestations of dacryoadenitis depend on whether the disease process is acute or chronic.[1,2,3] Acute dacryoadenitis usually presents with erythema and tenderness over the area of the lacrimal gland with associated enlargement of the gland and pain.[3,4] There may be suppurative discharge, conjunctival chemosis and swollen lymph nodes, usually cervical and preauricular.[3,4] Additional eye symptoms such as

Figure 1. Edema and erythema of the upper eyelids and bilateral chemosis.

Figure 2. Computed tomography of the orbits showing bilateral enlargement of the lacrimal glands (blue arrows).

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photophobia, tearing or a foreign body sensation may also occur. Fever and malaise may also occur.[3,4] On the other hand, chronic dacryoadenitis, frequently presents in a more indolent manner and it is associated with painless enlargement of the lateral eyelids over several months.[2,4,5]

The diagnosis of dacryoadenitis is based on physical examination and a thorough eye examination.[2] A CT scan of the orbit may be helpful, and it may reveal diffuse enlargement of the lacrimal gland, with marked enhancement with contrast (not observed in chronic dacryoadenitis) as was seen in our patient.[1,3] A laboratory evaluation may be performed to assess the etiology of this disease.[2,3]

Treatment and prognosis depend on the underlying etiology.[3,5] Viral dacryoadenitis, the most frequent, is usually self-limiting and only supportive measures are needed, like warm compresses and oral nonsteroidal anti-inflammatories.[5] If the etiology is unclear, which happened initially in our case, empirical antibiotics should be initiated with an oral penicillin derivative or a first-generation cephalosporin.[4,5] If the lacrimal gland enlargement does not subside after 2-4 weeks of treatment or if there is a high suspicion of malignancy, a lacrimal gland biopsy should be performed and the treatment and prognosis will depend on the underlying situation.[3,5]

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