Porto Biomed. J. 2017;2(1):28–29

PORTO BIOMEDICAL JOURNAL
WHERE SCIENCE MEETS KNOWLEDGE

Porto Biomedical Journal

http://www.portobiomedicaljournal.com/

Images in Biomedicine

Congenital dacryocystocele in infant: A rare cause of eye swelling

Fábio Barroso[a,*], Renato Silva[b], Catarina Mendes[a]

[a] Serviço de Pediatria, Centro Materno-Infantil do Norte, Centro Hospitalar do Porto, Porto, Portugal
[b] Serviço de Oftalmologia, Centro Hospitalar de São João, Porto, Portugal

ARTICLE INFO

Article history:
Received 6 September 2016
Accepted 13 November 2016
Available online 10 December 2016

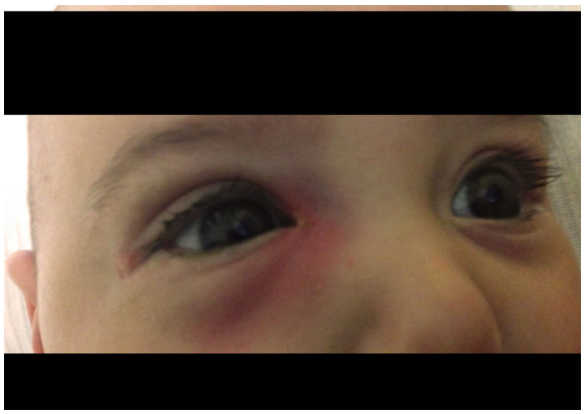

Fig. 1. Redness swelling around right eye punctum.

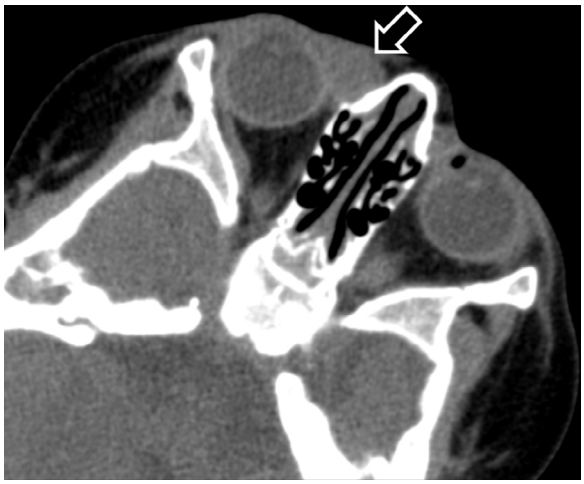

Fig. 2. Orbital CT scan: axial image showing a cystic mass at the medial canthus.

A four-month-old female infant, without relevant past medical history, was admitted to the emergency department with right eye swelling associated with erythema and purulent discharge over the past three days. The mother denied fever, irritability or conjunctival redness and according to her, the patient presented already spontaneous drainage through the right lacrimal duct since birth. On physical examination she presented a red-bluish, firm, somewhat mobile mass in the right medial canthal region (Fig. 1), the rest of the examination was unremarkable.

Computed tomography (CT) of the orbits demonstrated a well-defined round formation with hyperdense limits and inflammatory content, in continuity with the nasolacrimal duct (Fig. 2), confirming the diagnosis of congenital dacryocystocele, complicated with acute dacryocystitis.

The cultural test of the eye swab demonstrated the presence of *Haemophilus influenzae* and *Streptococcus pneumoniae* which were both susceptible to instituted antibiotic therapy (ceftriaxone and clindamycin combined with topical gentamicin).

The patient presented rapid clinical improvement and inflammatory biomarkers reduction.

Congenital dacryocystocele is an uncommon condition, affecting 0.1% of the infants with nasolacrimal duct blockage. It is believed to occur by obstruction proximal to the common canaliculus or at the level of the valve of Rosenmüller and valve of Hasner, resulting in distension of the lacrimal sac and mucoid fluid accumulation within the nasolacrimal system. This condition is usually present at birth. The majority cases of dacryocystocele resolve spontaneously,

* Corresponding author.
E-mail address: fabiodmb87@gmail.com (F. Barroso).

http://dx.doi.org/10.1016/j.pbj.2016.11.001

either during the intrauterine development or immediately after birth. It is more frequent in females and there is a familiar predisposition. Patients with bilateral involvement and significant intranasal extension can develop respiratory distress.[1,2]

The diagnosis is supported by clinical features characterized by a bluish tense cystic mass near the medial canthal angle of the affected eye, accompanied by epíphora (since birth) and recurrent conjunctivitis.[1–3]

Meningoencephalocele, hemangioma, epidermoid/dermoid cysts, nasal glyoma and lymphangioma should be considered among differential diagnosis.[1]

Dacryocistocele usually resolve with conservative measures such as hot compresses, lacrimal sac massage and topical antibiotics. However, dacryocystitis can develop within few days or weeks and intravenous antibiotics should be initiated.[4]

Some authors recommend an early probing of the lacrimal system for marsupialization of the intranasal portion of the cyst if present, while others argue it should not be done during the inflammatory process if there is a good response to antibiotic therapy.[1,4]

Conflicts of interest

The authors declare no conflicts of interest.

References

1. Wong RK, Vander Veen DK. Presentation and management of congenital dacryocystocele. Pediatrics. 2008;122:e1108–12.
2. Shekunov J, Griepentrog GJ, Diehl NN, Mohney BG. Prevalence and clinical characteristics of congenital dacryocystocele. J AAPOS. 2010;14:417–20.
3. Greenlaw SM, Chaney KS, Belazarian L, Wiss K. Congenital dacryocystocele. J Am Acad Dermatol. 2009;61:1088–90.
4. Cavazza S, Laffi GL, Lodi L, Tassinari G, Dall'Olio D. Congenital dacryocystocele: diagnosis and treatment. Acta Otorhinolaryngol Ital. 2008;28:298–301.