

A Case Report on Congenital Dacrocystocele with Dacrocystitis.

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Case Report

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ABSTRACT

Congenital dacryocystocele, also known as a *dacryocele*, often presents shortly after birth. It is an infrequent variant of nasolacrimal duct obstruction (NLDO) and is commonly unilateral but may be bilateral. The condition has a prevalence of about 1% is more common in females(1). We are reporting a case of neonate who presented with swelling within 6 hours of birth.

INTRODUCTION

Congenital dacryocystocele is an uncommon consequence of congenital nasolacrimal duct obstruction. It is believed to occur as a result of concomitant upper obstruction of the Rosenmuller valve and lower obstruction of the Hasner valve [1]. This causes accumulation of fluid in the drainage system, the sac is initially filled with mucoid material and presents as grey-blue cystic swelling just below the medial canthus [2,3,4]. It may extend intra-nasally forming a nasal cyst located in the inferior meatus causing respiratory distress during feeding and sleeping in neonates [5,6]. Because of the risk of becoming infected (acute dacryocystitis) and potentially lethal due to septicemia, aggressive management, including admission for intravenous antibiotics and surgical removal, is now advocated by many pediatric ophthalmologists if the cyst cannot be decompressed.

Case

We are presenting a case of 1 day old neonate 2nd in birth order born by elective LSCS with uneventful prenatal and natal period. At 6 hours of age mother noticed a bluish colored swelling just inferior to the left medial canthus. Otherwise the neonate was healthy with no history of respiratory distress or feeding difficulty. O/E There was a bluish colored soft fluctuant swelling just inferior to the left medial canthus measuring about 10mm by 12mm.

Figure 1: External exam of infant. Note the purplish swelling inferior to the medial canthus



There was normal reaction to light with normal pupillary reflexes. Patient was referred to an ophthalmologist and diagnosed as congenital nasolacrimal duct block with mucocele of the lacrimal sac. Treated with topical antibiotics and sac massage with regular follow up. After 15 days she reported to the clinic with complaints of fever, increase in the size of swelling and redness. Patient had developed dacryocystitis with preseptal cellulitis for which she was given parental antibiotics, IV fluids, warm compressions and sac massage. Patient improved within few days of therapy. The swelling completely subsided in 1.5 months without probing, irrigation or any other surgical intervention.

DISCUSSION

Congenital dacryocystoceles typically present in the first week or month of life and result from the blockage at the distal end of the nasolacrimal system at the valve of Hasner and the functional proximal obstruction at the junction of the common canaliculus and the sac (5,6). The result is distension of the lacrimal sac below the medial canthal tendon, which may appear as a mass. It is likely that a combination of dissolved mesoderm, mucus, amniotic fluid, tears, and bacterial colonization cause the distension of the lacrimal system seen in dacryocystocele. Management of a congenital dacryocystocele is conservative, and it includes gentle massage on the lacrimal sac, which can facilitate decompression and drainage of the contents into the nose [7,8]. Antibiotic drops may also be used prophylactically before infection occurs [7]. The resolution rate after a short course of topical antibiotics, warm compresses and massage has been reported to be 76% [9,10]. As possible complications, dacryocystitis can develop within a few days or weeks and requires intravenous antibiotics to prevent life-threatening sepsis [9]. Another serious complication is respiratory compromise. The course, appropriate timing and management of congenital dacryocystoceles vary greatly in the ophthalmic and pediatric literature. In 1978, Petersen and Robb [4] presented 7 cases of congenital dacryocystoceles within their larger study of 50 patients with NLDOs. Five of the 7 patients underwent probing and irrigation to decompress the lacrimal sac, 3 required repeat probing because of recurrence, and 1 patient who was not initially treated developed an abscess, necessitating systemic antibiotics and incision and drainage of the sac. The authors advocated early surgical decompression of the sac in cases of congenital dacryocystoceles. In contrast, in a 3½-year prospective study, Schnall and Christian [10] concluded that medical management of congenital dacryocystoceles can also be effective. In their series, 17 patients (all < 4 weeks of age) with 21 dacryocystoceles were examined. The authors advocated a conservative approach to noninfected dacryocystoceles and found that 16 dacryocystoceles (76%) resolved with medical management consisting of antibiotic drops, warm compresses, and massage 3 times per day. Probing was performed only if medical management failed after 2 weeks of treatment. Infected dacryocystoceles were treated with intravenous antibiotics, warm compresses, and massage.

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