Congenital dacryocystocoele with prenatal diagnosis

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DESCRIPTION

A male term infant was born to a 32-year-old primigravida after conception induced by in vitro fertilisation. The mother had experienced an uneventful prenatal course until the routine third trimester ultrasound screening, at the 35th-week of gestation, revealed a hypoechogenic cystic 12×12 mm mass on the right inferior medial orbital wall of the fetus, with no blood flow detected on Doppler ultrasound (figure 1). These initial findings suggested a dacryocystocoele. An infant boy was delivered vaginally with a birth weight of 3060 g. Apgar scores were 10 at 1 and 5 min. No initial respiratory nor feeding difficulties were perceived. Physical examination revealed only a bluish cystic mass in the medial canthal region of the child’s right eye, measuring 8×6 mm (figure 2).

He was admitted for routine care. During his stay, breathing and breastfeeding occurred uneventfully and the isolated cystic mass remained unchanged. Ophthalmology collaboration established the diagnosis of dacryocystocoele, indication for conservative care was given and a follow-up consultation arranged. The aetiology, treatment and alarm signs for complications were carefully explained to both parents prior to discharge (4 days after birth).

Seventeen days after discharge, a scant bilateral purulent discharge was noted, conjunctivitis was diagnosed and topical azithromycin initiated. Two days later, on follow-up, the newborn was asymptomatic and the dacryocystocoele resolved completely after manual massage performed by a paediatric ophthalmologist. At 1 year the child remains well.

Congenital dacryocystocoele is a rare type of lacrimal duct obstruction (0.1%), caused by a proximal and distal obstruction of the nasolacrimal drainage system, resulting in a cystic distension of the lacrimal sac.1 It is a benign lesion that typically resolves spontaneously in utero or in the early neonatal period,2-3 as in this case. Doppler ultrasound is a non-invasive method used to reliably distinguish dacryocystocoeles from other pathological conditions, such as haemangioma, dermoid cyst and nasal glioma.1-3 Dacryocystocoeles typically present as firm bluish swellings inferomedial to the medial canthus.1-3 Associated clinical complications, including dacryocystitis, periorbital cellulitis and respiratory distress, require systemic antibiotics or surgical management.1-3 Accurate prenatal diagnosis is important as it enables adequate postnatal follow-up.

Learning points

▸ Dacryocystocoele is a rare congenital condition and ultrasound is an important diagnostic tool, contributing to the differential diagnosis with other masses.
▸ Spontaneous resolution is common, reinforcing conservative treatment; nevertheless, infection-related complications require antibiotic treatment and, eventually, surgical intervention.
▸ Appropriate referral and parental education is essential on follow-up.

Figure 1 Prenatal ultrasound examination at 35 weeks gestation demonstrating (on axial view) a hypoechogenic cystic mass of the right inferior medial orbital wall measuring 12×12 mm (arrow). D, dacryocystocoele; LE, left eye; RE, right eye.

Figure 2 Newborn infant with a firm bluish cystic mass measuring 8×6 mm, corresponding to a dacryocystocoele of the right eye, located in the inner canthal area, demonstrating upward slanting of the palpebral fissure.
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