

SPECIAL SONO-CASE

Neonatal Dacryocystocele on Ultrasound

Recognizing a medial canthal cyst and assessing intranasal extension

CLINICAL CHALLENGE A 5-day-old infant presents with a bluish, nonpulsatile swelling below the medial canthus and intermittent respiratory noise during feeding.

Clinical context

Key element	Finding
Clinical detail 1	Present since birth
Clinical detail 2	No fever
Clinical detail 3	Bluish medial canthal mass
Clinical detail 4	Intermittent nasal obstruction during feeding

Learning objectives

- Perform a safe, focused examination adapted to the altered anatomy or clinical context.
- Recognize the principal diagnostic pattern and its most important mimics.
- Document limitations and communicate a clinically actionable impression.

Scanning protocol

- Use a high-frequency linear transducer with abundant gel and minimal pressure.
- Scan the medial canthus in orthogonal planes and identify relationship to the lacrimal sac and nasolacrimal duct.
- Use color Doppler to exclude internal vascularity.
- Assess the nasal cavity when feasible for an inferior meatal cyst; coordinate ENT/ophthalmology evaluation.
- Avoid compressing the globe and use neonatal infection-control precautions.

Sonographic findings

- A 1.2-cm well-defined cystic structure is centered in the lacrimal sac region, inferomedial to the orbit.
- No internal vascularity or solid component is present.

- A small cystic extension is seen along the nasolacrimal duct toward the inferior nasal meatus.

Diagnostic reasoning

Location, cystic appearance, and ductal continuity are characteristic of congenital dacryocystocele. Intranasal extension matters because neonates are preferential nasal breathers.

Suggested report

IMPRESSION Cystic lesion centered in the left lacrimal sac with extension along the nasolacrimal duct, compatible with congenital dacryocystocele. Possible small intranasal component. No internal vascularity. Ophthalmology/ENT correlation is advised, particularly given feeding-related respiratory symptoms.

Pitfalls and quality checks

- Confusing the lesion with hemangioma—use Doppler.
- Failing to evaluate potential intranasal extension.
- Applying excessive pressure near the globe.

ARDMS-style review questions

The typical location is:

- A. Inferomedial orbit at the lacrimal sac
- B. Lateral eyebrow
- C. Parotid tail
- D. Posterior scalp

Answer: A

Why is intranasal extension important?

- A. It may obstruct neonatal nasal breathing
- B. It always causes glaucoma
- C. It proves malignancy
- D. It excludes infection

Answer: A

Teaching takeaway

KEY POINT Location, cystic appearance, and ductal continuity are characteristic of congenital dacryocystocele. Intranasal extension matters because neonates are preferential nasal breathers.

References and guidance

- American Academy of Ophthalmology educational guidance on congenital nasolacrimal duct obstruction.
- AIUM Practice Parameter for Documentation of an Ultrasound Examination.

This fictional, de-identified composite case is intended for professional education. It does not replace local protocols, qualified interpretation, specialist consultation, or patient-specific medical care. Rare procedures and research settings require institution-specific guidance.