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## Radiologic Recognition of Orbital Dacryops

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## Radiologic Recognition of Orbital Dacryops

Cysts involving the lacrimal gland are uncommon. When these cysts occur posteriorly in the orbital lobe, the clinical appearance is that of a painless, slowly expanding mass in the region of the lacrimal gland. This mass must be differentiated from infiltrative or epithelial tumors of the gland. Because of the scarcity of clinical, diagnostic, and pathologic information on orbital dacryops in the literature, we report CT, sonographic, and histopathologic findings on an adult patient with orbital dacryops.

### Case Report

A 59-year-old man had an ophthalmologic examination because of a fullness in the superior temporal part of the right orbit. A discrete, nontender, well-encapsulated mass was palpable in the region of the lacrimal fossa.

B- and A-scan sonography (Fig. 1A) showed a cystic, cylindrical mass involving the superior temporal orbit. Axial (Fig. 1B) and coronal (Fig. 1C) CT scans showed multiple cysts both in the lacrimal fossa and extending into the posterior orbit. A lateral orbitotomy was performed, and the entire tumor mass was removed (Fig. 1D). Histopathologic examination confirmed the diagnosis of orbital dacryops. The cyst wall was fibrotic and lined by low cuboidal epithelium, and lacrimal gland tissue was involved intimately with the dilated lacrimal gland duct.

### Discussion

Lacrimal gland cyst or "dacryops" generally has been regarded as a rare ophthalmologic finding [1-4]. Cyst formation may occur in

either the palpebral or orbital lobe and is thought to depend on the coexistence of two relatively uncommon conditions: prolapse of the lacrimal gland to a sufficient degree to produce obstruction of the lacrimal ducts, and a chronic inflammatory disorder of the lacrimal gland tissue that weakens the walls of the ductules and allows them to expand [2].

Cysts of the palpebral lobe of the lacrimal gland are the most common of all lacrimal cysts. These usually occur unilaterally [5] and are diagnosed easily on clinical examination. The classical appearance is that of nontender, lateral lid swelling and blepharochalasis, along with circumscribed, bluish, translucent cysts in the cul-de-sac of the superior temporal orbit. Cases exhibiting some degree of tenderness and irritation have been reported [4].

Cysts of the orbital lobe have been reported rarely. They occur deep in the orbit and are extremely difficult to diagnose by ophthalmologic examination. Clinically, these cysts usually appear as an orbital mass producing proptosis and inferonasal displacement of the globe. They must be differentiated from benign and malignant tumors of the orbit, particularly from those that originate in the lacrimal gland. Sonography easily shows the cystic nature of this tumor, narrowing the differential diagnosis by ruling out an infiltrative or epithelial lesion.

In our patient, CT revealed a dilated duct that had folded onto itself in a serpiginous, convoluted fashion. In several views, the vermiform cyst was transected multiple times, resulting in a configuration that resembled that of multiple cysts. The orbital bone appeared to be normal, and the contents of the cyst were similar to the intraocular fluids in radiographic density.

Thus, dacryops can be distinguished from cystic orbital dermoids and epidermoids. These last two are typically associated with a well-corticated, bony fossa in the adjacent orbit because they initially arise

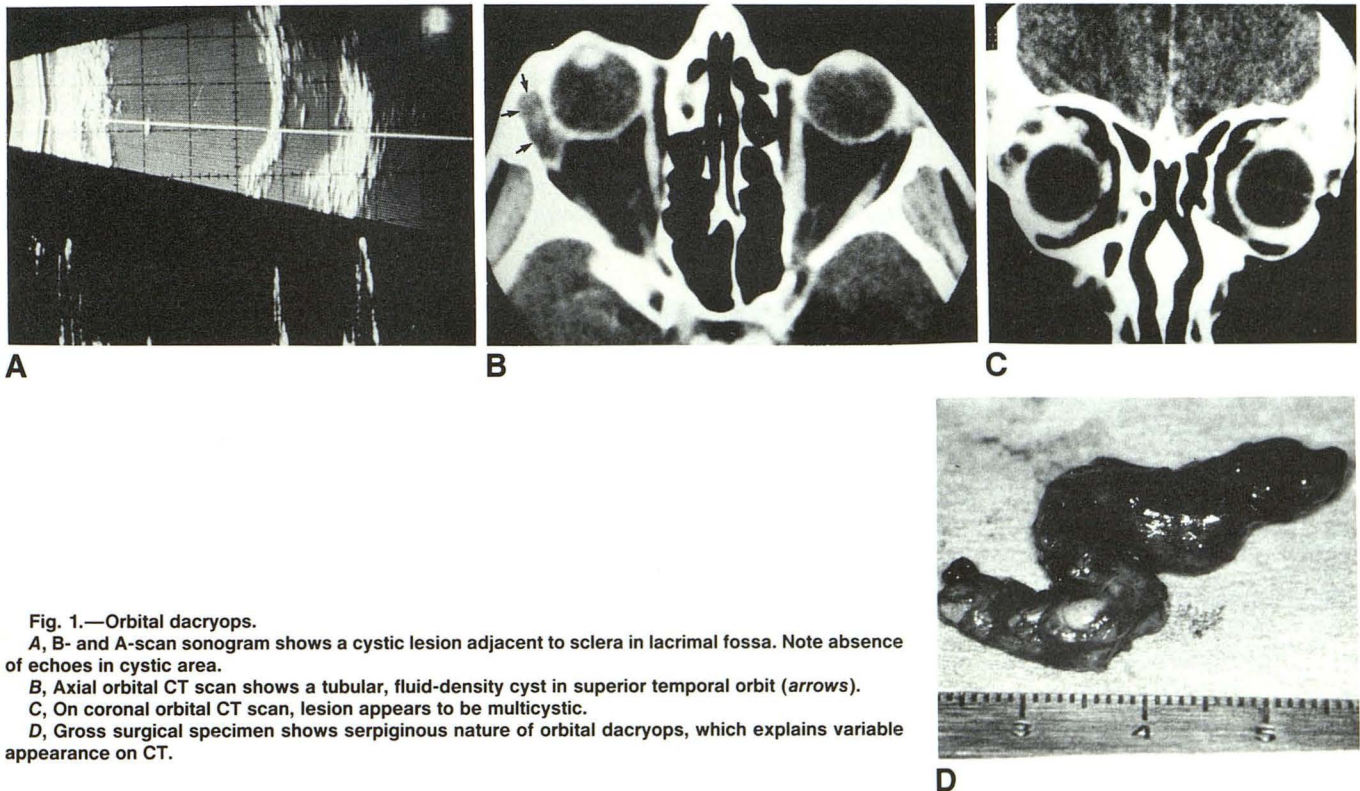


Fig. 1.—Orbital dacryops.

A, B- and A-scan sonogram shows a cystic lesion adjacent to sclera in lacrimal fossa. Note absence of echoes in cystic area.

B, Axial orbital CT scan shows a tubular, fluid-density cyst in superior temporal orbit (arrows).

C, On coronal orbital CT scan, lesion appears to be multicystic.

D, Gross surgical specimen shows serpiginous nature of orbital dacryops, which explains variable appearance on CT.

within the diploe of bone. Additionally, fat or keratinaceous densities that may layer within the cystic cavity are characteristic of dermoids and epidermoids.

Orbital dacryops is a distinct clinical entity that may appear as an expanding mass in the region of the lacrimal gland. It can be distinguished from other lacrimal gland tumors on the basis of sonographic and CT criteria.

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