testing of immune function disclosed a severe deficiency of MBL (6 ng/mL; reference range, ≥100 ng/mL).

Comment. Deficiency of MBL has been correlated with a variety of infections in otherwise healthy individuals but may also enhance susceptibility to certain infections in persons receiving chemotherapy or those with secondary immunosuppression for other reasons. Genetic polymorphism explains the range of serum concentrations of MBL found in the general population, with severe serum MBL deficiency associated with homozygosity of yet unnamed minority alleles. We are unaware of any previous reports of recalcitrant Candida endophthalmitis associated with MBL deficiency in an otherwise healthy individual. Mannose-binding lectin replacement therapy using plasma-derived or recombinant lectin is under investigation but is not currently available for clinical use.

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Figure 1. Fundus photographs of the right eye. A, A 1-disc area white lesion of the retina with neurosensory detachment in the superior macula was seen shortly after the patient started treatment. B, Five weeks later, the lesion and macular exudate progressed in size. New hemorrhages appeared in the retina peripheral to the infiltrate. C, Seven weeks after the initial visit, the lesion involved the entire retina from superior to inferior vascular arcades. There was moderate posterior vitritis.

Figure 2. The enucleated eye had luxuriant growth of yeasts and pseudohyphae in the remaining cortical vitreous (periodic acid–Schiff, original magnification ×175).

Orbital dermoid cysts are choristomas believed to arise during development from sequestered ectodermal rests. The cysts are lined by keratinized stratified squamous epithelium, contain adnexal structures, and are often attached to superotemporal orbital bone. A variant of the orbital dermoid cyst, the conjunctival dermoid cyst, is lined by nonkeratinized epithelium with goblet cells and tends to be found anteronasally in orbital soft tissue without bony attachment.
Report of a Case. A 35-year-old man had a 15-year history of chronic epiphora and an erythematous, soft, non-tender swelling near his right medial canthus (Figure 1A). He was considered to have a dacryocystocele. Despite an external dacryocystorhinostomy, his swelling persisted (Figure 1B).

Subsequent computed tomography showed a well-circumscribed mass inferomedially in the right orbit.Computed tomography was performed for sagittal (C) and coronal (D) views of the anterior orbit. Midorbit coronal (E) and retrobulbar coronal (F) views on computed tomography show inferonasal bony asymmetry. Postdacryocystorhinostomy magnetic resonance imaging with sagittal T1-weighted (G) and coronal T1-weighted fat saturation (H) views shows biphasic mass contents. Arrows indicate the mass; arrowheads, the bony anomaly.

Figure 1. External photographs, computed tomographic images, and magnetic resonance images. External photographs show the patient before (A) and 2 weeks after (B) dacryocystorhinostomy. Computed tomography was performed for sagittal (C) and coronal (D) views of the anterior orbit. Midorbit coronal (E) and retrobulbar coronal (F) views on computed tomography show inferonasal bony asymmetry. Postdacryocystorhinostomy magnetic resonance imaging with sagittal T1-weighted (G) and coronal T1-weighted fat saturation (H) views shows biphasic mass contents. Arrows indicate the mass; arrowheads, the bony anomaly.
that was extrinsic to the nasolacrimal system but encroached on the nasolacrimal sac fossa and its proximal duct. It measured 22 mm anteroposteriorly. There was bony asymmetry between the orbits, with the right inferomedial wall adjacent to the lesion more angular in profile. This bony asymmetry was evident even posterior to the mass, along its presumed attachment more posteriorly in the orbit (Figure 1E and F). Computed tomographic images and magnetic resonance images (Figure 1G and H) showed that the cyst's contents were biphasic with signal characteristics indicating fat superiorly and proteinaceous material inferiorly.

The mass was removed by anterior transcutaneous orbitotomy. It adhered to soft tissue posteriorly in the orbit. (Figure 1C and D) that was extrinsic to the nasolacrimal system but encroached on the nasolacrimal sac fossa and its proximal duct. It measured 22 mm anteroposteriorly. There was bony asymmetry between the orbits, with the right inferomedial wall adjacent to the lesion more angular in profile. This bony asymmetry was evident even posterior to the mass, along its presumed attachment more posteriorly in the orbit (Figure 1E and F). Computed tomographic images and magnetic resonance images (Figure 1G and H) showed that the cyst's contents were biphasic with signal characteristics indicating fat superiorly and proteinaceous material inferiorly.

The mass was removed by anterior transcutaneous orbitotomy. It adhered to soft tissue posteriorly in the orbit.
bit, and significant blunt dissection was needed to detach it. The removed lesion was thin walled and soft, containing pale cheesy material with fine hairs.

Histopathological analysis showed that part of the cyst wall resembled conjunctiva (Figure 2A), whereas another part resembled upper lacrimal sac epithelium (Figure 2B and D). The lacrimal sac removed at dacryocystorhinostomy had chronic inflammatory cells and scarring (Figure 2C). A further part of the cyst wall resembled caruncle (Figure 2E).

Comment. Conjunctival dermoid cysts are choristomas thought to arise from cells destined to become the conjunctiva. Our patient’s lesion had features typifying previously reported conjunctival dermoid cysts, but it also had other atypical features suggestive of caruncular and lacrimal sac epithelium, a relatively posterior orbital attachment, and associated bony anomaly. That the lesion’s contents were mixed and in different phases is commensurate with its different (secretory) epithelia. Mass effect of the choristoma presumably compromised nasolacrimal drainage in our patient and caused a dacryocele and low-grade dacryocystitis.

Our case had many features in common with that of a recent report by Dutton et al. Both patients were young adults who had large cysts with relatively posterior orbital attachment and similarly biphasic contents radiologically. Dutton and colleagues excised their patient’s recurrent lesion twice; the first resembled a classic dermoid cyst histologically, but the second resembled a conjunctival dermoid cyst. These histological entities may well have coexisted in the same lesion but were simply sampled separately at each surgery (Alan D. Proia, MD, PhD, written communication, June 28, 2007). That a choristoma in the posterior orbit can contain different ectodermally derived entities is certainly possible, as our case and that of Dutton and colleagues show.

Lacrimal drainage compression by a choristoma caused this unusual clinical manifestation. The case highlights the additional notion that choristomas containing conjunctiva may show varied histological features whose identification requires appropriate sampling and analysis. Elements resembling conjunctiva, lacrimal sac, and caruncle coexisting in a choristoma might attract speculation that the precursor ectodermal cells of these entities lie close enough to each other during development or that they have a common progenitor. If these cells thus ectopically sequester before differentiation or divergence, then the structures would come to lie together as a complex choristoma. Alternatively, cells sequestering after differentiation would yield a simple choristoma such as the conjunctival dermoid cyst.

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COMMENTS AND OPINIONS

Smoking and Age-Related Macular Degeneration

We read with great interest the recent article from the Beaver Dam Study in which, after controlling for age, sex, and baseline severity of age-related macular degeneration (AMD), smoking was related to the long-term incidence and progression of AMD. It is in agreement with previous population-based studies such as the Blue Mountains Eye Study, the Rotterdam Study, and others. We would like to raise the question of whether the described association between smoking and AMD may be due to a confounding effect. Smoking is associated with a low socioeconomic status (Beijing Eye Study, unpublished data). A low level of education is associated with hyperopic refractive error (Beijing Eye Study, unpublished data). Correspondingly, smokers vs nonsmokers were significantly more hyperopic in the Beijing Eye Study (unpublished data). Hyperopia has, however, been described as being associated with AMD. Combing these associations, one may infer that AMD is more common in hyperopic subjects, who have a lower socioeconomic statuses and higher frequency of smoking. In most of the population-based studies in which an association between AMD and smoking was described, socioeconomic status and hyperopia were not included as potentially confounding factors in the statistical multivariate analysis. We would, therefore, like to ask the authors about the potentially confounding effects of level of education and hyperopia on the described association between AMD and smoking.

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