A brain magnetic resonance imaging scan showed no abnormalities. Lumbar puncture showed an increased opening pressure (225 cm H₂O), but the cerebrospinal fluid showed no cells, no hypoglycorrhachia, and no elevation in the protein concentration.

Treatment with ATRA was discontinued, and the APML was treated with a combination of arsenic trioxide, daunorubicin hydrochloride, and cytosine arabinoside. Over the next 6 weeks, subsequent to and corresponding with the discontinuation of ATRA therapy, the headache, papilledema, and abducens palsy resolved. Treatment with arsenic trioxide, daunorubicin, and cytosine arabinoside was continued for 3 months, and the patient has remained in remission.

Comment. The differential diagnosis in this case included meningeal invasion of APML cells that then caused increased intracranial pressure and bacterial meningitis in an immunocompromised (APML) patient. Pseudotumor cerebri (secondary to ATRA treatment) was diagnosed. Abducens palsy and papilledema reversed following discontinuance of treatment with ATRA (the combination of arsenic trioxide, daunorubicin, and cytosine arabinoside were successful in the induction of remission).

In this patient, papilledema was secondary to pseudotumor cerebri induced by treatment with ATRA. Retinoic acid is an oxidized form of retinol (vitamin A). The pathogenesis of pseudotumor cerebri in patients with APML being treated with ATRA is thought to be similar to the mechanism in vitamin A overdose: overdosage of vitamin A is postulated to impair cerebrospinal fluid absorption at the level of the arachnoid villi or granulations. Normalization of intracranial pressure resolved other accompaniments of increased intracranial pressure, such as abducens palsy and headache. This case emphasizes the importance of recognition by ophthalmologists of this potential side effect of ATRA in the treatment of APML.

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The author has no relevant financial interest in this article.

This study was presented at the Atlantic Coast Retina Conference, January 18, 2002, Philadelphia, Pa.

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Adult Nasolacrimal Duct Mucocele

Nasolacrimal duct mucoceles (NLDs) are encountered almost exclusively in the pediatric population. Recognition of a mucocele associated with nasolacrimal duct obstruction is important, as its presence dictates alternate management. In this report, we describe an unusual occurrence and the management of an NLD in conjunction with lacrimal drainage obstruction in an adult, emphasizing the need for thorough evaluation of the nasal passage in not only pediatric but also adult patients.

Report of a Case. A 51-year-old white woman was evaluated for right eye epiphora and progressive ipsilateral nasal congestion of 3 years’ duration. She denied epistaxis, facial fracture, malignancy, and known sinus or nasal diseases. Ophthalmic examination findings were only notable for an increased right eye tear lake. Findings from the remainder of the right eye examination and the entire left eye examination were unremarkable, including normal eyelid position and structure, with all puncta patent, and no palpable lacrimal sac distention or mass. Dye disappearance was markedly delayed on the right eye; nasolacrimal duct obstruction was confirmed with irrigation. Intranasal examination revealed a mass located below the inferior turbinate. Computed tomography demonstrated a fluid-filled cyst and ipsilateral nasolacrimal duct dilatation (Figure 1). There was no radiographic evidence of sinus disease.

Endoscopically, a smooth, nodular, light pink mass was found below the inferior turbinate (Figure 2). Following marsupialization with mucosal wall resection, the lacrimal drainage system irrigated freely, and a bicanalicular stent was placed. Histologically, the excised tissue consisted of chronically inflamed ciliated columnar epithelium with goblet cells and submucosal fibrosis consistent with a mucocele. Postoperatively, she was treated with an oral antibiotic (cephalexin hydrochloride), nasal decongestant (oxymetazoline), and a topical antibiotic/steroid drops (tobramycin/dexamethasone). The stent was removed after 3 months, and she remains asymptomatic 1 year postoperatively.

Stereoscopic pair showing disc edema, hemorrhage, and circumferential retinal folds temporal to the disc (Paton lines) in the left eye.
Comment. We describe an adult patient with an NLDM, managed with marsupialization and stent placement, thus avoiding a more involved dacryocystorhinostomy. Inferior meatus masses, which secondarily cause nasolacrimal duct obstruction, are infrequently encountered.4 The occurrence of NLDMs, which results from—as opposed to causes—lacrimal drainage obstruction, is vanishingly rare. In an adult patient, an NLDM extending beneath the inferior turbinate has not previously been encountered in our practices, and we are unaware of any published reports.

In children, NLDMs are presumed to relate to failed canalization of the valve of Hasner and, in this case, might have resulted from secondary occlusion, possibly following local inflammation.1-3 Although early treatment of NLDMs in infants has been advocated to prevent complications, including infection and airway obstruction, there is no consensus on optimal therapy. Several treatment modalities have been proposed for the management of NLDMs in children and usually involve nasolacrimal probing and intranasal mucocele marsupialization with mucosal wall resection.1-3 Resolution has also been described with conservative management, including nasal decongestants and observation.1-3 The adult patient described in this report was successfully treated with endoscopic mucocele marsupialization with partial mucosal wall resection and stent placement.

As emphasized by this case, despite its rarity, a mucocele should be considered in adult patients with nasolacrimal duct obstruction, and an intranasal examination should be performed prior to dacryocystorhinostomy. Similar to pediatric patients, mucocele marsupialization with stent placement seems to be appropriate therapy.

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