sions containing a predominance of a single tissue. The complex choristoma can be isolated or associated with linear nevus sebaceous syndrome. We report 2 rare cases of isolated complex choristoma that were treated with amniotic membrane grafting, supplemented with CLAG in 1 case. Thoracic examination of both cases failed to reveal any associated ocular or neurologic abnormalities.

Treatment of dermoid depends on the size, location, and the mechanical effects of the lesion on the surrounding structures. Most dermoids are 2 to 3 mm, but they may sometimes be large (12-15 mm), causing mechanical obstruction or corneal astigmatism. Many of the reported cases were treated by excision, though some were treated with a combination of lamellar or penetrating keratoplasty; however, the results of both of these procedures are not encouraging and have led to failed grafts.

The general principles of treatment of limbal-based ocular surface lesions include wide excision of the lesion over cornea, conjunctiva, and sclera, followed by alcohol epitheliectomy, wide resection cryotherapy, or closure. Amniotic membrane has also been used as an adjunct procedure in treating diffuse ocular surface neoplasias for surface reconstruction after excision of the lesion. Keeping in mind the large size of the lesion and the age of the patient, these 2 cases were treated with excision and amniotic membrane transplantation. In case 1, CLAG was used to prevent limbal stem cell deficiency. In case 2, two layers of amniotic membrane were used for better results (as proven in the treatment of deep corneal and scleral ulcers) with the intention of providing collagen layer supplementation, basement membrane reconstruction, promotion of epithelialization, and wound healing. In both cases, visual potential was hampered by the development of amblyopia; therefore, the patients were advised to undergo antiamblyopia therapy.

Based on our experience with these 2 cases, we believe that surgical excision of large dermoids followed by amniotic membrane transplantation, with or without conjunctival-limbal autograft, is an alternative modality to achieve good ocular surface construction. With timely intervention, amblyopia may be prevented or treated early. The histologic confirmation of an unsuspected complex choristoma warrants a multidisciplinary approach.

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Aggressive Conjunctival Squamous Cell Carcinoma in a Patient Following Liver Transplantation

Squamous cell carcinoma of the conjunctiva is usually a slowly progressive neoplasm that rarely invades the eye or orbit. Immunosuppressed patients are at increased risk to develop conjunctival squamous cell carcinoma. Tumors in immunosuppressed patients can behave aggressively. We describe a patient receiving immunosuppression treatment after liver transplantation, who developed an aggressive conjunctival squamous cell carcinoma that caused his death within 1 year of diagnosis.

Report of a Case. A 56-year-old man was referred for additional therapy after a biopsy of a conjunctival lesion revealed a poorly differentiated invasive squamous cell carcinoma that had been incompletely excised. His medical history included a liver transplantation for chronic sclerosing cholangitis 3 years previously and treatment with immunosuppressive drugs (azathioprine and tacrolimus).

On examination, his visual acuity was 20/20 OU. The left eye was unremarkable. The right eye showed a temporal conjunctival wound without clinical evidence of tumor. Based on a review of the previous histopathologic findings, wide surgical excision of the wound, double freeze-thaw cryotherapy, and superficial alcohol keratectomy were performed to remove residual microscopic disease and prevent recurrence. Histopathologic examination showed a completely resected tumor with uninvolved surgical margins.

Six months later, the patient developed sudden redness and swelling of the right upper eyelid. An external examination showed hemorrhagic axial protrusion and a palpable firm mass near the superolateral margin of the orbit (Figure 1). Ocular motility was restricted in all gazes and corneal sensation was intact. Magnetic resonance imaging of the brain and orbits disclosed a diffuse, enhancing mass that extended along the lateral wall of the right orbit from the rim to the apex (Figure 2), without radiologic evidence of cavernous sinus thrombosis.

An orbital exenteration was performed using an eyelid-splitting technique after an incisional biopsy revealed poorly differentiated squamous cell carcinoma. The small,
poorly cohesive tumor cells had relatively scanty cytoplasm and vesicular nuclei with prominent nucleoli. The tumor filled the temporal third of the orbit and contained foci of hemorrhage and necrosis (Figure 3A). One to 2 mitotic figures were present per high power field. Several nerves near the orbital apex were entrapped in the tumor but others were tumor-free.

The tumor cells showed intense positive immunoreactivity for basic cytokeratin marker AE3 (Figure 3B), strongly coexpressed vimentin, and were focally positive for acid cytokeratin marker AE1. The cells were nonreactive for low-molecular weight cytokeratin marker CAM5.2, involucrin, leukocyte common antigen, melanoma marker HMB45, and S100 protein. In situ hybridization for panhuman papilloma virus DNA was negative, with appropriate positive and negative controls.

Two months later, the patient had a massive orbital recurrence with direct extension of the tumor to the brain and preauricular and cervical lymph node metastases. External beam radiotherapy was delivered but the patient died of brain invasion 2 months later.

Comment. Squamous cell carcinoma of the conjunctiva is a low-grade malignancy with little potential for local invasion and metastasis. It most often occurs in the interpalpebral area near the corneo-scleral limbus in older patients and appears as a fleshy, gelatinous, or leukoplakic mass. Metastasis of conjunctival squamous cell carcinoma occurs in less than 1% of patients, usually to the regional lymph nodes. Rarely, intraocular invasion or distant metastases to the lung and bone have occurred.

Immunosuppressed patients are at risk for developing opportunistic malignancies. Patients with human immunodeficiency virus infection are at risk for developing lymphoid tumors and Kaposi sarcoma, while patients with organ transplantation are at risk for developing lymphoid tumors and skin cancer. Aggressive conjunctival squamous cell carcinoma has been reported in patients with human immunodeficiency virus infection and conjunctival epithelial neoplasia in patients with organ transplantation receiving cyclosporine therapy. The patient described here received azathioprine and tacrolimus therapy. It is not clear whether one or both drugs had a role in the development of the aggressive conjunctival squamous cell carcinoma in this patient.

Conjunctival squamous cell carcinoma has been associated with human papillomavirus, especially type 16. Human papillomavirus was not found in the orbital specimen in this patient; however, it is not clear whether the development of conjunctival squamous cell carcinoma in this patient was related to the carcinogenic effect of immunosuppressive drugs or to the diminished immune surveillance of transformed cells.

Recurrence of conjunctival squamous cell carcinoma is generally greater in patients with higher grade undifferentiated tumors and in those with incomplete initial excision. Our patient was referred to us after incomplete initial excision, and despite a seemingly adequate reexcision of his tumor, he developed aggressive recurrence of the tumor, with rapid extension to the
brain and regional lymph nodes. Generally, involvement of the surgical margin by tumor cells on histopathologic examination is an indication to repeated surgical resection with wider margins, especially in immunosuppressed patients.

In summary, we described a 56-year-old patient with liver transplantation who developed aggressive conjunctival squamous cell carcinoma that invaded the brain and led to death despite orbital exenteration. Physicians should be aware that conjunctival squamous cell carcinoma may be more aggressive in immunosuppressed patients.

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Angle-Closure Glaucoma Associated With Ciliary Body Detachment in Patients Using Topiramate

Topiramate (Topamax; Ortho-McNeil Pharmaceutical, Raritan, NJ) is a sulfamate-substituted monosaccharide that is used primarily as an antiepileptic medication and also demonstrates preliminary efficacy in the treatment of bipolar disorders and pain control of migraine. Recently, cases of acute angle-closure glaucoma (AACG) presumably associated with topiramate have been reported.1 2 However, the causative role of topiramate in producing angle closure in these cases was confounded by concomitant use of other drugs, notably selective serotonin reuptake inhibitors (SSRIs), which have also been reported to cause AACG.

We describe 2 cases of bilateral AACG associated with topiramate use and with ultrasound biomicroscopic signs of ciliochoroidal effusion. The patients were not using any other drugs previously reported to be associated with glaucoma.