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Conjunctival Squamous Cell Carcinoma Treated With Topical 5-Fluorouracil

A 91-YEAR-OLD man was referred with a 3-month history of redness, burning, pain, and foreign-body sensation in the right eye.

Physical examination of the right eye revealed a leukoplakic lesion of the nasal interpalpebral conjunctiva from the limbus to the caruncle, extending to the superonasal quadrant (**Figure 1**), involving the tarsal conjunctiva and the margin of the nasal third of the superior eyelid. The lesion showed intrinsic vascular fronds. The peripheral nasal cornea was only slightly involved by superficial neovascularization. No signs of intraocular inflammation were present.

This diffuse lesion was scraped to obtain cytologic smears. The cytologic diagnosis was consistent with moderately differentiated squamous cell carcinoma of the conjunctiva (**Figure 2**).¹ Because of the extension, cytologic type of the lesion, and the patient's age, we treated this case (as we had previously done in other patients) with topical chemotherapy using 1% 5-fluorouracil eye-drops. The treatment regimen was administered 4 times daily during the course of 4 weeks. Clinical examination was performed weekly during the treatment and then after 15 days and 1, 3, and 6 months. In the third week of treatment, we observed an acute transient conjunctivitis and superficial keratitis, easily controlled with topical drugs (artificial tears and antibiotics). At the end of the treatment, cytologic smears obtained in the previously involved areas showed regular, imma-

ture, benign epithelial cells intermingled with malignant epithelial cells and repair aspects. One month after the end of the treatment, the previously involved conjunctiva was completely free of lesion at biomicroscopic examination and corneal new vessels had disappeared (**Figure 3**). Three and 6 months after treatment, the situation was unchanged and some cytologic scrapings of the previously involved nasal conjunctiva showed no evidence of malignant cells (**Figure 4**). We have been following up the patient for 7 months, and at the last examination neither clinical nor cytologic signs of recurrence were present.

COMMENT

Classic treatment of localized conjunctival epithelial tumors is surgical excision with adjunctive cryotherapy.^{2,3} When the conjunctival carcinoma is diffuse, involving both the palpebral and bulbar conjunctiva, it is difficult to retain a functional eye. Resection of the entire conjunctival area with use of extensive grafts is rarely performed because it gives unsatisfactory morphologic and functional results. The alternative may be radiotherapy, which gives excellent results in tumor control, but can give rise to relevant ocular side effects. Because distant metastases from conjunctival squamous cell carcinoma are rare and because the aim of therapy is to avoid orbital or intraocular invasion, the possibility of inducing tumor regression with topical chemotherapy has been demonstrated.⁴ The efficacy of topical 5-fluorouracil, alone or in addition to

surgery, in the treatment of corneal and conjunctival epithelial neoplasias has been recently reported by Yeatts et al⁵ who recommended its use in patients with intraepithelial disease. This case shows that diffuse squamous cell carcinoma of the conjunctiva may be successfully treated with topical 5-fluorouracil alone and it demonstrates that topical antineoplastic chemotherapy may be a valid alternative in the treatment of such lesions, particularly when tumor extension or patient's age contraindicates surgery.

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REFERENCES

1. Boccatto P, Blandamura S, Midena E. *Citodiagnostica in Oftalmologia*. Rome, Italy: Edizioni Mediche Scientifiche Internazionali; 1994:169-192.
2. Erie JC, Campbell RG, Liesegang TJ. Conjunctival and corneal intraepithelial and invasive neoplasia. *Ophthalmology*. 1986;93:176-183.
3. Fraunfelder FT, Wingfield D. Management of intraepithelial conjunctival tumors and squamous cell carcinomas. *Am J Ophthalmol*. 1983;95:359-363.
4. de Keizer RJW, de Wolff-Rouendaal D, Van Delft JL. Topical application of 5-fluorouracil in premalignant lesions of cornea, conjunctiva and eyelid. *Doc Ophthalmol*. 1986;64:31-42.
5. Yeatts RP, Ford JG, Stanton CA, Reed JW. Topical 5-fluorouracil in treating epithelial neoplasia of the conjunctiva and cornea. *Ophthalmology*. 1995;102:1338-1344.

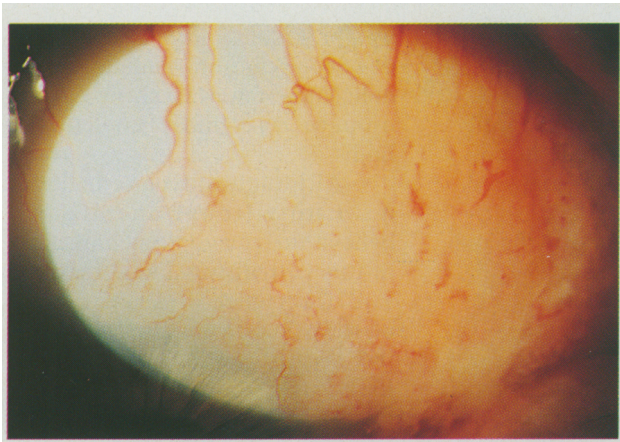


Figure 1. Conjunctival lesion at the time of referral. An elevated fleshy lesion of the nasal interpalpebral conjunctiva extends from the limbus to the caruncle, involving the superonasal quadrant. The lesion shows intrinsic vascular fronds.

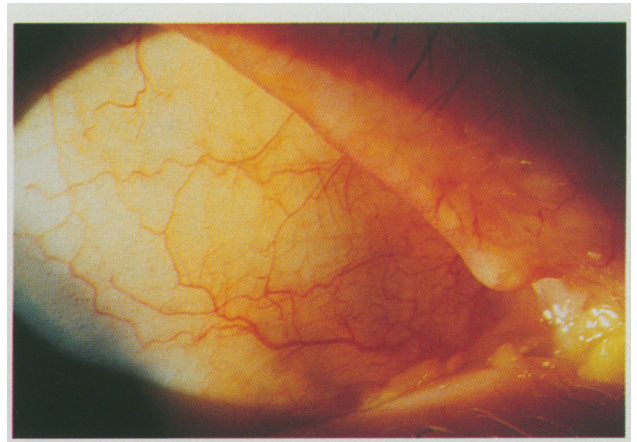


Figure 3. The conjunctiva in the same areas as shown in Figure 1 one month after the end of treatment with 5-fluorouracil eyedrops. No clinical signs of the lesion are present.

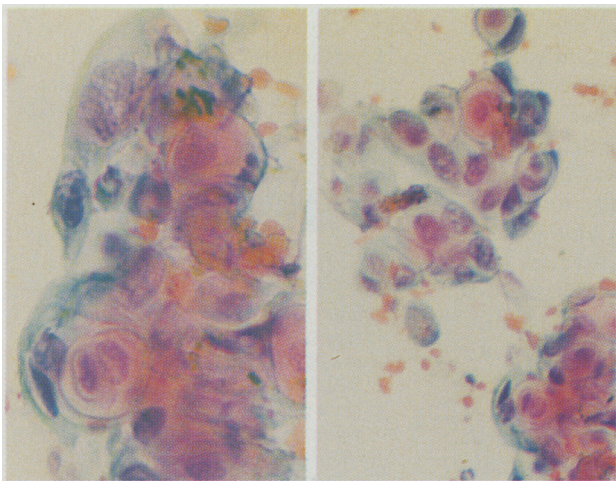


Figure 2. Conjunctival cytologic smears of the lesion shown in Figure 1 are consistent with moderately differentiated squamous cell carcinoma (Papanicolaou, original magnification $\times 125$ [left] and $\times 240$ [right]).

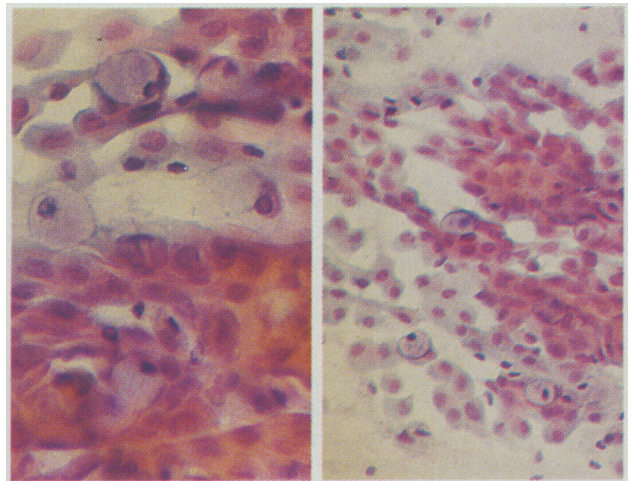


Figure 4. Conjunctival cytologic smears performed 3 months after the end of treatment with 5-fluorouracil show normal conjunctival epithelial and goblet cells (Papanicolaou, original magnification $\times 125$ [left] and $\times 240$ [right]).