

A. Tumors (continued)

Treatment (continued). Adjuvant cryotherapy or adjuvant radiotherapy can sometimes be required. Apart from NHL of the conjunctiva, radiotherapy does not play an important part in the primary treatment of conjunctival neoplasms. Conditions situated within the epithelium that can change into an invasive tumor (e.g., carcinoma in situ and primary acquired melanosis) are accessible to cytostatic treatment with mitomycin C drops (0.02%). The conjunctival defect remaining after tumor excision usually closes spontaneously. It should be ensured that adhesion of the bulbar and tarsal conjunctiva (symblepharon) does not occur. The conjunctival sac must sometimes be wiped repeatedly or an Illig shell must be inserted. Very large conjunctival defects require reconstructive treatment in the form of an oral mucosa graft, an amniotic membrane graft, or a conjunctival graft from the other eye.

When malignant conjunctival tumors have penetrated into the orbit, the entire orbital contents usually have to be removed (exenteration of the orbit). Metastasis from squamous cell carcinoma and malignant melanoma of the conjunctiva is usually lymphatogenous at first. Surgical clearance of the regional lymph nodes (neck dissection) can therefore still be curative. At the stage of hematogenous distant metastasis, particularly with conjunctival melanoma, all the currently available therapies can at best increase life expectancy but cannot produce cure.

Prognosis. The prognosis of conjunctival tumors is generally very good. However, recurrences of the malignant neoplasms and even of the biologically benign pterygium are frequent. A fatal outcome is very rare with squamous cell carcinoma. In contrast, the mortality of conjunctival NHL is about 5–10%, and is about 20–30% in conjunctival melanoma, where the prognosis depends mainly on the location and thickness of the tumor. For the very unusual conjunctival metastasis, survival is usually only a few months.

B. Injuries

Injuries of the conjunctiva affecting mainly children and young men are very frequent. They include subconjunctival hemorrhage, superficial abrasions, foreign bodies, and lacerations.

Foreign bodies penetrate the conjunctiva in the course of occupational or leisure activities. They usually consist of metal, glass (including broken glasses), sand, or organic material (wood, insects). Removing them from the lower conjunctival sac with a cotton tipped applicator or tweezers is usually unproblematic. If they are in the upper conjunctival sac, irrigation of the conjunctival sac and single or double eversion of the upper lid is occasionally required for their removal (**Ba** and **b**). Scratches on the cornea often provide indirect evidence of a subtarsal foreign body. Rarely, foreign bodies that are not removed are incorporated into the conjunctiva or subconjunctival connective tissue (**Bc–f**). Lacerations of the conjunctiva occur due to sharp and less often due to blunt injuries (**Bg**). Smaller tears do not require any treatment. Larger tears are usually sutured, especially when the more deeply located connective tissue of Tenon's capsule is also involved. Traumatic defects of conjunctival substance occur very rarely. Corrosive injuries (**Bh**) will be discussed in Chapter 8, "Cornea". Subconjunctival air (emphysema) can occur with fractures of the paranasal cavities.

Apart from the sometimes harmful corrosive injuries, conjunctival injuries very rarely cause persistent functional damage. However, in the case of lacerations and massive subconjunctival bleeding, involvement of the globe (e.g., in the form of a scleral perforation or an intraocular foreign body) should be ruled out. In case of doubt, inspection of the sclera and funduscopy with the pupil dilated are indicated.

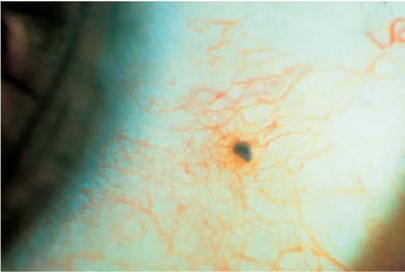
B. Injuries



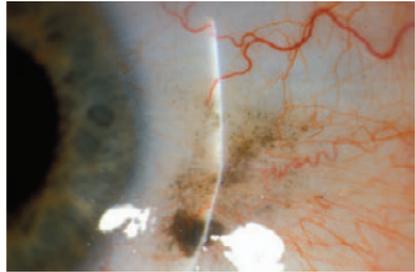
a Subtarsal foreign body after simple lid eversion



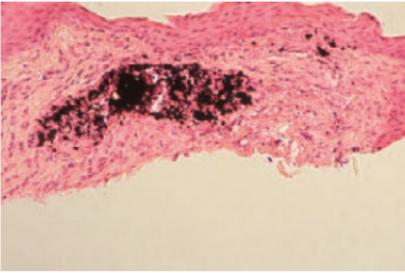
b Superficial splash of paint on the conjunctiva



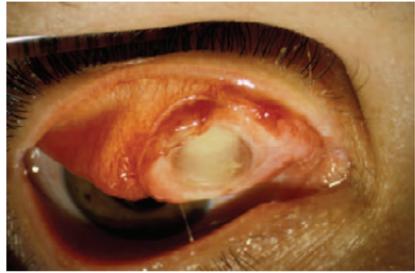
c Foreign body penetrating the conjunctiva (subconjunctival)



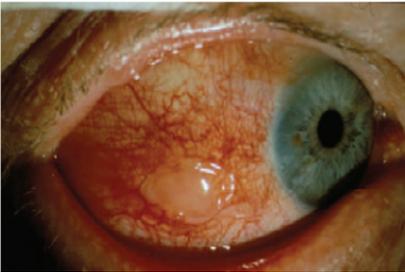
d Black gunpowder penetrating the conjunctiva



e Black gunpowder penetrating the conjunctiva; histology following conjunctival excision



f "Forgotten" contact lens scarred onto the upper tarsus



g Tear of the conjunctiva with incipient infection; injury from a cat's paw



h Mild corrosion injury of the conjunctiva with disrupted vessels