



Figure 29-6 A, B, Cystic compound nevus of the conjunctiva. C, D, Conjunctival malignant melanoma. In C, note the deflection of the beam of the slit lamp over the surface of the lesion, indicative of invasion. (A, B, From Folberg R, et al: Benign conjunctival melanocytic lesions: clinicopathologic features. *Ophthalmology* 96:436, 1989.)

atypia develop conjunctival melanoma; the best treatment of conjunctival melanoma is its prevention through extirpation of its precursor lesion. The lesions tend to spread first to the parotid or submandibular lymph nodes. Approximately 25% of conjunctival melanomas prove to be fatal.

KEY CONCEPTS

- Conjunctival scarring, a consequence of a variety of conditions, may result in painful loss of vision by interfering with the delivery and maintenance of the tear film.
- Many conjunctival neoplasms originate at the limbus, the seat of stem cells of the ocular surface.
- Conjunctival malignancies—especially conjunctival melanomas—tend to spread through the rich lymphatics of the conjunctiva to regional lymph nodes.

Sclera

The sclera consists mainly of collagen and contains few blood vessels and fibroblasts; hence, wounds and surgical incisions tend to heal poorly. Immune complex deposits within the sclera, such as in *rheumatoid arthritis*, may produce a necrotizing *scleritis*.

The sclera may appear “blue” in a variety of conditions. Some of these are:

- It may become thin following episodes of scleritis, and the normally brown color of the uvea may appear blue clinically because of the optical Tyndall effect.
- Sclera may be thinned in eyes with exceptionally high intraocular pressure and because this zone of scleral ectasia is lined by uveal tissue, the resulting lesion, known as a *staphyloma*, also appears blue.
- The sclera may appear blue in osteogenesis imperfecta.
- The sclera may appear blue because of a heavily pigmented congenital nevus of the underlying uvea, a condition known as *congenital melanosis oculi*. When accompanied by periocular cutaneous pigmentation, this condition is known as *nevus of Ota*.

Cornea

Functional Anatomy

The cornea and its overlying tear film—not the lens—make up the major refractive surface of the eye (Fig. 29-7). Parenthetically, *myopia* typically develops because the eye is too long for its refractive power, and *hyperopia* results from an eye that is too short. The popularity of procedures such as laser-assisted in situ keratomileusis (LASIK) to sculpt the cornea and change its refractive properties