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creating a symptomatic dry eye syndrome. Rarely, the pterygium may induce irregular corneal warpage, or even obscure the visual axis of the eye, resulting in diminished acuity.

Clinical inspection of pterygium reveals a raised, whitish, triangular wedge of fibrovascular tissue, whose base lies within the inter-palpebral conjunctiva and whose apex encroaches the cornea. The leading edge of this tissue often displays a fine, reddish-brown iron deposition line (Stocker's line).

The vast majority of pterygia (about 90 percent) are located nasally. These lesions are more commonly encountered in warm, dry climates, or in patients who are creating a symptomatic dry eye syndrome.

If I have a pterygium, where can I be evaluated? If you live in the Goldsboro area, an appointment can be made with the ophthalmologist, Charles S. Zwerling, MD of Goldsboro Eye Clinic. For an appointment call 919-736-3937

FUTURE PROSPECTS

The first report of a surgical treatment of a pterygium is more than 3000 years old. The management of pterygia and recurrent pterygia is improving yet many questions remained unanswered. Future studies may elucidate the cause of the pterygium as well as the cause of complications related to the adjunctive therapy after pterygium surgery and prevent recurrence.
pterygium be surgically removed? This will depend largely on the judgment of your physician. Removal will likely be advised if the pterygium is growing far enough onto the cornea to threaten your line of vision. Pterygia may also be removed if they cause a persistent foreign body sensation in the eye, or if they are constantly inflamed and irritating. In addition, some pterygia grow onto the cornea in such a way that they can pull on the surface of the cornea and change the refractive properties of the eye, causing astigmatism. Removing the pterygium may decrease the astigmatism.

What is involved in the surgical removal of a pterygium?

The removal may take place in a procedure room or operating room setting. The pterygium is carefully dissected away. In order to prevent regrowth of the pterygium, your ophthalmologist may remove some of the surface tissue of the same eye (conjunctiva) and suture it into the bed of the excised pterygium. Alternatively, an antimetabolite such as mitomycin may be applied to the site. Postoperatively, your physician will monitor the site for infection and complications. The removal may take time and may require multiple procedures.

PATHOPHYSIOLOGY

Ultraviolet light exposure (both UV-A and UV-B) appears to be the most significant factor in the development of pterygia. This may explain why the incidence is vastly greater in populations near the equator and in persons who spend a great deal of time outdoors. Other agents that may contribute to the formation of pterygia include allergens, noxious chemicals and irritants (e.g., wind, dirt, dust, air pollution). Heredity may also be a factor. Whatever the etiology, pterygia represent a degeneration of the conjunctival stroma with replacement by thickened, tortuous elastotic fibers. Activated fibroblasts in the leading edge of the pterygium invade and fragment Bowman's layer as well as a variable amount of the superficial corneal stroma. Histologically, pterygium development resembles actinic degeneration of the skin. Pterygia often persist...
after surgical removal; these lesions appear as a fibrovascular scar arising from the excision site. These "recurring pterygia" probably have no relationship to ultraviolet radiation, but rather may be likened to keloid development in the skin.

MANAGEMENT

Because pterygia appear to be linked to environmental exposure, manage asymptomatic or mildly irritative cases with UV-blocking spectacles and liberal ocular lubrication. Advise patients to avoid smoky or dusty areas as much as possible. Treat more inflamed or irritated pterygia with topical decongestant/antihista mine combinations (e.g., Naphcon-A) and/or mild topical corticosteroids (e.g., FML, Vexol) four times daily in the affected eye.

Surgical excision of pterygia is indicated only for unacceptable cosmesis and/or significant encroachment of the visual axis. The treatment of choice involves dissection and removal of the fibrous tissue down to the level of Tenon's capsule. Free conjunctival flaps are then grafted over the bare sclera.

Postoperative adjuvant therapy with b-radiation, topical thiotepa, mitomycin-C and other antimetabolic agents may diminish the chance of recurrence. In cases that involve significant corneal scarring, lamellar or penetrating keratoplasty may be indicated.

CLINICAL PEARLS

A pterygium is a benign clinical entity in most cases. Distinguish between the potentially progressive pterygium and the less threatening pinguecula-large pingueculae may be difficult to differentiate from pterygia.

Conjunctival intraepithelial neoplasia (CIN), a precursor of conjunctival squamous cell carcinoma, is another clinical entity that must be ruled out in the diagnosis of pterygia. This lesion is generally unilateral, elevated and gelatinous, with deep irregular vascularization and an ameboid shape. CIN is an invasive ocular cancer that can inflict significant morbidity. Obtain a biopsy if CIN is suspected. Pterygia can affect vision if left unchecked. The corneal degradation may extend beyond the leading edge of the lesion. This means that the pterygium need not cover the visual axis to inflict significant visual compromise. Surgery must be performed before vision is affected. Follow up on medium- to large-sized pterygia at least once or twice yearly, and include a manifest refraction, corneal topography, slit lamp evaluation with measurement of the pterygium, and photodocumentation if possible. When should a