induced complications have occurred including cataract, corneal problems, hyphaema, and focal iris vasculopathy. The authors conclude that the study provides an adequate assessment of the early complications following plaque radiotherapy. They point to the fact that radiation complications usually occur in the first 12 to 24 months after plaque radiotherapy, and that the mean follow up for iris melanomas in this study was 26 months. While this is true, it is apparent from the results that complications, particularly cataract, tended to occur in those patients with the longest follow up and it is possible that further adverse effects may occur in time. Despite these complications, useful vision was preserved in a significant number of cases. Plaque radiotherapy appears to provide the clinician with a viable alternative to enucleation in the management of large diffuse iris melanomas.

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Pterygium – an ophthalmic enigma

Pterygia, the wing-shaped fleshy growths on the corneal limbus have been known to physicians for thousands of years. The term pterygium was introduced to the English language in 1875 by Walton.[1] Despite being recognised for many years and being very common in some parts of the world, very little is known about the pathogenesis of the condition. This ignorance is reflected in the poor results of intervention and the wide range of treatments advocated.

It has been accepted for some time that environmental factors are responsible for the development of pterygium.[2–4] More recently, it has become clear that ultraviolet light exposure is the most important environmental influence[5 6] and that high exposure in the second or third decade of life is particularly relevant to causation.[7] Most pterygia develop on the nasal limbus[8 9] and it has been proposed that this is attributable to reflected sunlight being preferentially focused at this point.[10]

The way in which ultraviolet light interacts with the limbus and cornea to produce a pterygium is unknown. The histopathology is non-specific. Hyaline degeneration and a low grade inflammatory reaction is what is regularly seen.[11–14] This does little to suggest an underlying cause.

Genetic factors are also important.[15] In particular environments some racial groups are affected more than others[8] and there is a tendency for pterygia to occur in families.[16–18]

The presence of an unsightly uncomfortable lump on the surface of the eye is usually indication enough for surgical removal. Less commonly, a pterygium may interfere with vision, either by occluding the optical axis or by inducing astigmatism.[19 20] Unfortunately, excision is often complicated by recurrence and recurrent pterygia are usually more troublesome than their antecedents.[21–23]

Various approaches as an alternative to, or adjunctive to, surgery have evolved. The use of ionising radiation,[24–26] heat,[27] lasers,[28–30] and antimetabolites[31–35] have been advocated as adjuncts to excision. Furthermore, there has been a strong move to use a planned surgical repair with a flap of normal conjunctiva or limbus[36–44] or a free graft.[36–44] Apparently, improved results with this form of repair have encouraged the implication of the ephemeral limbal stem cell in the aetiology and pathogenesis of pterygia. Just how these cells might be involved can only be debated in a theoretical sense because there is no way of identifying these important but elusive progenitor cells unequivocally, although they clearly exist.

The use of cellular and molecular biology techniques offers the prospect of a fresh perspective of many ancient diseases. Perhaps this will be so for pterygium. Karukonda *et al* have begun to apply these techniques. They have taken the first steps in looking at the fundamental cell biology of pterygia. The authors report in this issue (p 313) that pterygia do not contain large numbers of proliferating cells. Their work addresses a problem of clinical relevance. If cell proliferation is an important part of the pathology of pterygia cytostatic therapy is likely to be specifically effective. The lack of specificity of cytostatic measures such as irradiation and mitomycin C accounts for the previous complications which have been attributed to these treatments.[25 45 46] If cellular proliferation is not a feature of the pathology an alternative approach is required. Perhaps there is a regional disturbance of growth and differentiation which is best managed by replenishing the area with appropriately differentiating groups of cells and this accounts for the successes attributable to various forms of autogenous repair which have been reported recently.[36–44]

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