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Mooren's Ulcer

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First described by Bowen and later by McKenzie, Mooren's ulcer is an idiopathic, destructive peripheral corneal lesion with minimal scleral involvement, typically progressing centrifugally and then centrally and posteriorly. It may involve the full thickness of the cornea and lead to perforation. Mooren's ulcer name comes from the name of the German ophthalmologist who most fully described it and presented a collection of several cases.

Its most distinctive clinical features include an 'eating away' of the cornea central to an obvious crescent-shaped epithelial defect with stromal melting, likened to tissue destruction that could be imagined as having been caused by a rodent (rodent ulcer).

Mooren's ulcer causes moderate to severe pain often out of proportion to the degree of clinically obvious ocular inflammation, along with adjacent conjunctival injection and minimal underlying scleral involvement. The disease has the characteristics of an autoimmune process, and both we and other researchers have documented autoimmune phenomena, both in the eye and systemically, in patients suffering from Mooren's ulcer. Reported risk factors include prior corneal trauma or surgery, expression of HLA-DR17 and DQ2 haplotypes, hepatitis C virus exposure, and hookworm infestation. However, Mooren's ulcer remains a diagnosis of exclusion after infectious and rheumatologic causes of peripheral ulcerative keratitis have been ruled out.

It typically responds to aggressive steroid and/or immunosuppressive chemotherapy. Wood and Kaufman described two forms of the disease: one more benign, unilateral form which often responds to intensive topical steroid therapy and/or conjunctival resection, and another more "malignant" bilateral form which progresses despite all attempted local treatments and responds only to systemic immunosuppressive chemotherapy. Other treatments include amniotic membrane grafting, application of cyanoacrylate tissue adhesive with a bandage contact lens, and, in advanced cases, localized lamellar or full

thickness keratoplasty. There is a good track record for infliximab, a tumor necrosis factor-alpha (TNF-α) inhibitor, in the treatment of patients with refractory Mooren's ulcer.

It is also important to note that corneal lesions resembling Mooren's ulcer, such as peripheral ulcerative keratitis (PUK), may represent the initial presentation of potentially life-threatening conditions; therefore, careful systemic evaluation of patients with Mooren's ulcer is recommended.

In conclusion, Mooren's ulcer is an immunological corneal disease. This lesion should be treated aggressively with corticosteroids along with immunomodulators. Surgical treatment should be considered when a risk of corneal perforation is present, when the perforation appears, or under acute necrosis. PUK, which can represent a life-threatening condition, should be considered in the differential diagnosis of patients with Mooren's ulcer.

References

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