

Malignant Mooren's ulcer treated with amniotic membrane transplant and azathioprine

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Abstract

Mooren's ulcer is a rare entity and is of unknown cause. Various treatment options have been described in the literature. Combined modalities of treatment including superficial keratotomy and amniotic membrane transplant followed by immunosuppression usually helps. I had reviewed the literature and suggest the stepwise approach in managing the deadly menace posed to eye surgeons across the world.

Keywords: malignant mooren's ulcer, amniotic membrane transplant, azathioprine

Introduction

Moorens ulcer is a rare entity and of unknown cause. Its treatment is on the lines of immune mediated diseases which involve the use of corticosteroids and immunosuppressive drugs such as Azathioprine and Methotrexate. Surgical treatment involves conjunctival resection in the perilimbal region, partial and full thickness keratoplasty. A study published in British Journal of Ophthalmology in 2000 has studied 550 cases of Mooren's ulcer within a duration of 36 years in China (Jiaqi Chin *et al.* Mooren's ulcer in China: a study of clinical characteristics and treatment. BJO 2000; 84. 1244-1249).

By definition, Mooren's ulcer or *ulcus rodens* is of unknown cause. The peripheral cornea is near the capillary bed and partly derives its nutrients from the capillary arcades. Proximity to this vascular and lymphatic arcade may explain the peripheral location of PUK, as inflammatory cells and mediators can gain access to this part of the cornea more readily [4]. A significant number of cells in Mooren's ulcer express MHC class 2 antigens. Autoreactivity to cornea specific antigen may play a role in the pathogenesis of this disorder, humoral and cell mediated immune mechanisms may be involved in the initiation and perpetuation of corneal destruction [5]. It is a Type III hypersensitivity reaction. Mooren's ulcer is also associated with Hepatitis C [6] and helminthic infections [7]. On immunohistochemistry, in a study by Shinomiya *et al* [8], Helper T cells and macrophages contribute to the pathogenesis of Mooren's ulcer. Two types of Mooren ulcer have been described by Wood and Kauffman [9].

1. Slowly progressive, unilateral, occurs in elderly population.
2. Aggressive type, more common in Africa, bilateral, poorly responsive to medical and surgical intervention.

The treatment of aggressive type of Moorens ulcer as in our case is also aggressive medical therapy in the form of systemic and topical steroids and requires immunosuppressive therapy as Azathioprine, Methotrexate, Cyclosporine or Cyclophosphamide. Surgical management includes conjunctival resection, superficial keratectomy, amniotic membrane transplant, lamellar keratoplasty, penetrating keratoplasty and keratoprosthesis.

Step Ladder Approach for Immunosuppression [10]

- Step 1- Assess Disease Severity
- Step 2- Severity Based Therapy
- Step 3- Regular Follow- Up
- Step 4 - Reassess And Modify Therapy When Needed.

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