

Peripheral Ulcerative Keratitis Associated with Multiple Myeloma

Dear Editor,

Corneal involvement in multiple myeloma (MM) is rare. We would like to report a first case of peripheral ulcerative keratitis (PUK) associated with MM which improved on systemic corticosteroid treatment.

Clinical Picture

A 66-year-old lady with known MM presented with red painful right eye and reduced vision, with no ocular discharge. At the point of presentation, she had been diagnosed with MM for 2 months. She did not suffer from auto-immune diseases. Systemic examination was unremarkable. Blood test for rheumatoid factor, pANCA, cANCA, ANA and dsDNA were negative. Inflammatory markers were not elevated. Visual acuity was counting fingers (CF) in the affected eye. Ocular examination revealed an injected right eye with a punched-out and undermined perilimbal corneal epithelial defect and thinning at 5 o'clock position, with stromal infiltrates (Fig. 1).

Treatment

Despite being on topical ocular antibiotics, it progressed to affect the limbal area. Corneal scrape for microscopy, staining and culture and sensitivity were negative, thus ruling out microbial cause of the keratitis. Fundoscopy was normal. Therefore an immune mediated mechanism was suspected and she was started on intravenous methylprednisolone (1 gram OD) for 2 days, followed by tapering dose of oral prednisolone (starting at 60 mg OD).

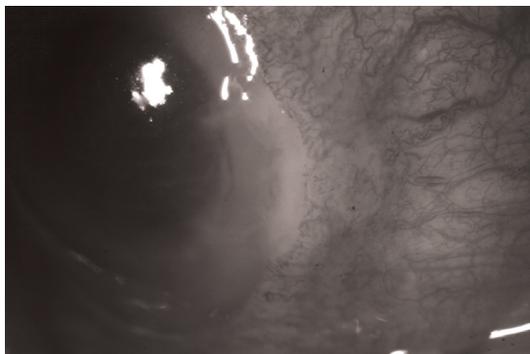


Fig. 1. Perilimbal punched-in, thinning corneal epithelial defect, with infiltrates and undermined edges at 5 o'clock position of the right eye on presentation.

Outcome

Two days later, the lesion improved with markedly reduced infiltrates and inflammation, and shrinking of the lesion (Fig. 2). The vision improved to 6/18 on Snellen's chart. This patient then completed her chemotherapy with remission of her MM, with no recurrence of any corneal pathology.

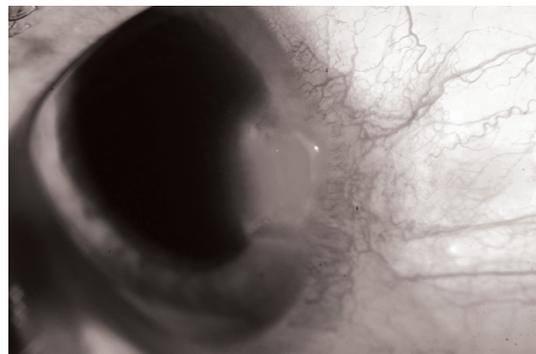


Fig. 2. The same corneal lesion in Fig. 1, 2 days post-systemic corticosteroid, showing markedly reduced infiltrates and inflammation, with the lesion size getting smaller.

Discussion

Cornea involvement is uncommon in MM and involves crystalline and calcium deposits in the various layers.¹ Our patient did not have any of these signs. She developed worsening PUK, whilst in between chemotherapy cycles for her MM, which was abated by systemic corticosteroid. It appeared that there was a temporal association between the development of PUK and MM which was considered to be active in between chemotherapy cycles. It is thought that she developed vasculitis secondary to MM, a rare association,² leading to localised chemokine release, resulting in PUK.³ Such association has not been previously reported. In conclusion, immune mediated PUK should be considered in MM and treated with systemic corticosteroid when infective causes of keratitis and autoimmune diseases³ have been ruled out. In addition, MM should be considered when investigating patients for PUK. Our case highlights a first case of PUK associated with MM.

REFERENCES

1. Knapp AJ, Gartner S, Henkind P. Multiple myeloma and its ocular manifestations. *Surv Ophthalmol* 1987;31:343-351.
2. Keung YK, Yung C, Wong JW, Shah F, Cobos E. Association of temporal arteritis, retinal vasculitis and xanthomatosis with multiple myeloma: case report and literature review. *Mayo Clin Proc* 1998;73:657-660.
3. Gregory JK, Foster CS. Peripheral ulcerative keratitis in the collagen vascular diseases. *Int Ophthalmol Clin* 1996;36:21-30.

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