TOPICAL INSULIN USE IN A RESISTANT CORNEAL ULCER IN A PATIENT WITH NEUROTROPHIC KERATOPATHY: CASE REPORT

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PURPOSE

- Persistent corneal ulcers are a significant therapeutic challenge, particularly in cases with a history of ocular herpes zoster.
- Topical insulin administration has been suggested as an alternative treatment option to promote corneal epithelialization.

CASE PRESENTATION

A 47-year-old man with history of ocular herpes zoster three months prior to presenting, attended our emergency department with ocular pain, redness and decreased visual acuity in the left eye.

CLINICAL FINDINGS

- BCVA was 1/10
- SLE revealed an eccentric neurotrophic corneal ulcer with stromal thinning and haziness.
- Anterior segment examination revealed posterior iris synechiae without signs of active inflammation.

THERAPEUTICAL APPROACH

- Conservative treatment with preservative-free artificial tears and topical antimicrobial profilaxis was initiated.
- At follow-up, no clinical improvement was noted.
- A therapeutic contact lens was applied and autologous serum eye drops were subsequently introduced.
- One week follow-up: complete corneal epithelialization.

RECURRENCE

- Two months later, the patient re-presented with recurrence of pain, redness, and decreased vision. Slit-lamp examination revealed once again a large recurrent eccentric corneal ulcer(Fig. 1).
- Signs of active inflammation, including perilimbal injection and anterior chamber flare were detected.
- Treatment re-initiated: Autologous serum eye drops and oral valacyclovir (1000 mg three times daily) were prescribed with a tapering maintenance dose.
- One-week follow-up: marked clinical improvement was observed. However, a residual corneal epithelial defect persisted despite reduction in ulcer size(Fig. 2)

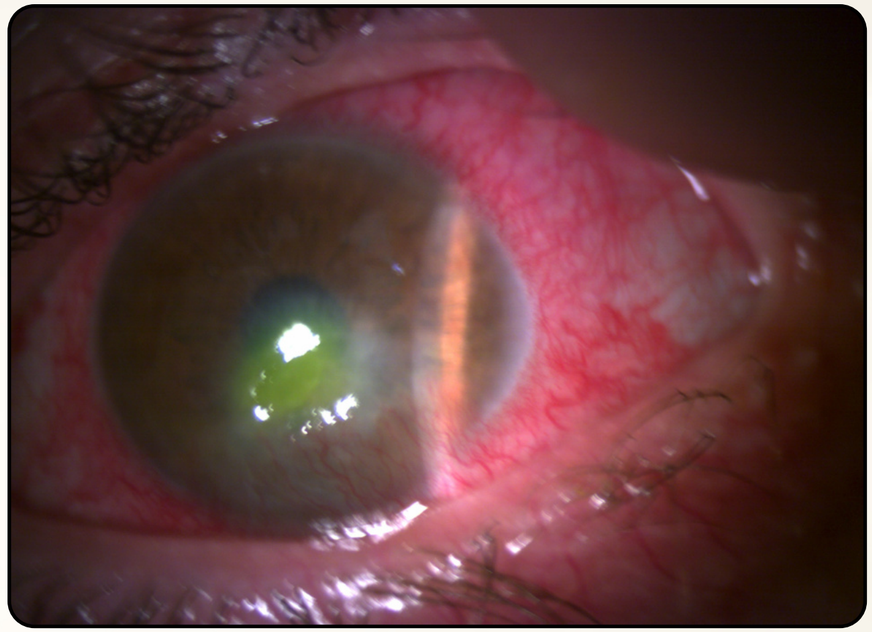

Fig.1 Slit lamp photograph at presentation.

NOVEL THERAPEUTICAL APPROACH

- After 3 weeks of incomplete healing, compounded topical insulin eye drops (Actrapid 1IU/ml four times daily) were initiated[1].
- One week later, the patient reported significant pain relief and complete epithelial closure was confirmed.(Fig. 3)
- The corneal surface remained stable, with sustained epithelial integrity observed up to five weeks after treatment initiation and the patient remains asymptomatic on artificial tears.

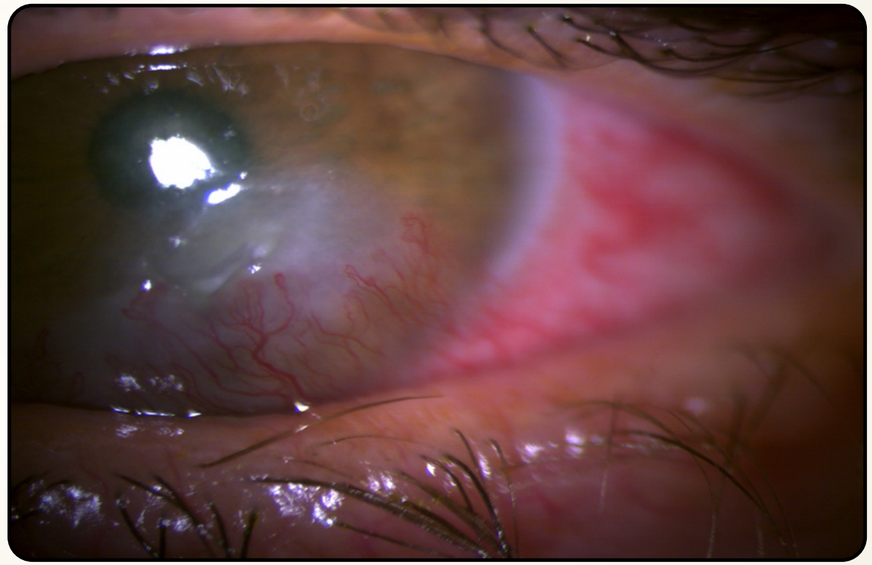

Fig.2 Slit lamp photograph at 1 week follow-up.

CONCLUSIONS

- Standard therapy achieved short-term control.
- Topical insulin administration have emerged as an effective and safe treatment option in recurrent, treatment resistant neurotrophic corneal ulcers, as our case highlights[2].

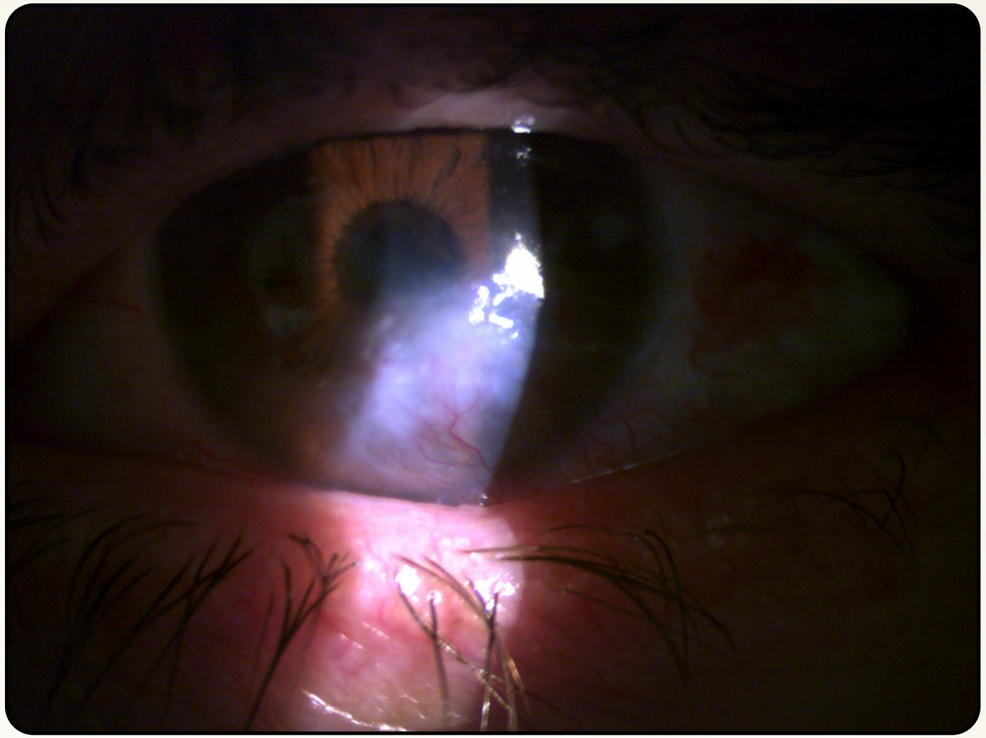

Fig. 3 Slit lamp photograph revealing complete epithelial closure.

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