

Acute Corneal Hydrops in Keratoconus With Atopic Dermatitis



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A 27-year-old Japanese man with a history of keratoconus (KC) and atopic dermatitis presented with sudden onset of decreased vision in his left eye. Best corrected visual acuity was 20/200 in the left eye. Slit-lamp examination and cross-sectional imaging with anterior segment optical coherence tomography revealed marked corneal stromal and epithelial edema with corneal protrusion in his left eye (Figure A). Thus, he was diagnosed with acute corneal hydrops. Pressure patching with an ophthalmic ointment improved the corneal edema gradually. The corneal clarity was improved 2 months later, but a residual scar in the central cornea remained, which prevented visual recovery (Figure B).

KC is a corneal ectatic disorder characterized by progressive corneal thinning and protrusion. It causes distorted vision because of irregular corneal astigmatism. To date, it has generally been considered that the disease has an onset in the early teenage years and progresses. The reported incidence of KC is estimated to be 1:2000. Factors such as atopy, ocular allergy, and eye rubbing are well-known risk factors for KC, and this patient had a history of these factors. Acute corneal hydrops is a condition where a rupture in Descemet's membrane allows aqueous humor into the corneal stroma, and is observed in advanced KC. To prevent acute corneal hydrops and decrease in vision, management of atopy, ocular allergy, and chronic habits of eye rubbing is essential.

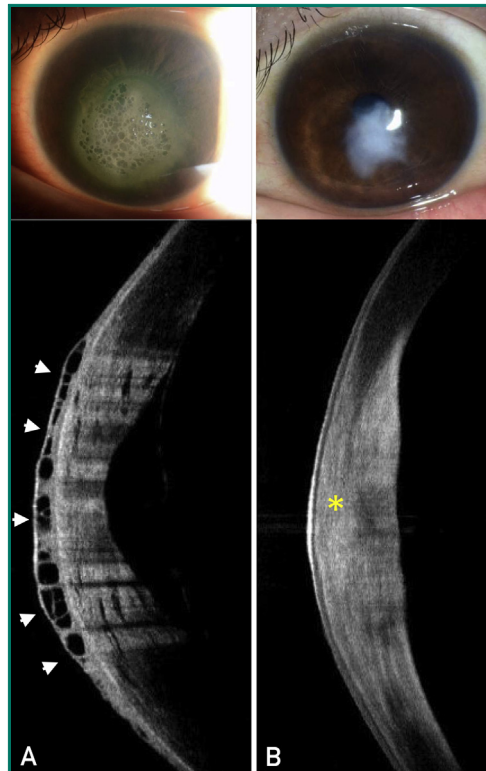


FIGURE. Vertical cross-sectional optical coherence tomography images through the center of the cornea. A, Marked corneal stromal and epithelial edema (white arrow heads) with corneal protrusion are observed in his left eye. B, Residual scar in the central cornea (yellow asterisk) after the treatment is observed as hyper-reflective lesion.

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