

Case report

Epithelial downgrowth masquerading as hypertensive anterior uveitis

S. Waduthantri^{1,2}, S. P. Chee^{1,2,3,4}

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Introduction

Hypertensive anterior uveitis is commonly associated with infectious etiologies, especially herpes viruses¹. However, parasitic infections such as toxoplasmosis, and masquerade syndromes may also present with raised intraocular pressure (IOP)^{1,2}. Failure to make a diagnosis in a timely manner can lead to glaucomatous optic neuropathy¹. This case illustrates epithelial downgrowth as a rare cause of hypertensive anterior uveitis, highlighting the importance of a comprehensive diagnostic approach in cases with persistent anterior segment inflammation and raised IOP.

Case report

A 64-year-old male was referred to the uveitis clinic for left chronic anterior uveitis and intractable glaucoma. One month earlier, he presented to acute care clinic with blurred vision, pain and redness in the left eye associated with nausea, headache and vomiting for 10 days. He has undergone left cataract surgery and intraocular lens implant elsewhere the year prior. Other than a history of pulmonary tuberculosis treated 20 years ago, he was otherwise healthy. Examination then showed that the left cornea was edematous. There was extensive iridocorneal touch 360 degrees around with a shallow anterior chamber (AC) present only centrally. In addition, there was AC cells 2+ and the pupil was small with what appeared to be occlusio pupillae. The IOP was 56 mmHg. He was diagnosed with left chronic anterior uveitis and secondary glaucoma, and treated with topical steroids, anti-glaucoma eye drops and oral acetazolamide, and referred to glaucoma and uveitis services. He was subsequently offered trans-scleral cyclophotocoagulation as he had medically uncontrolled glaucoma.

At the uveitis clinic, his left visual acuity (VA) was hand movement, and the IOP was 54 mmHg. The slit lamp examination findings were like when he first

presented. In addition to the extensive peripheral anterior synechiae, we observed a translucent membrane over the anterior surface of the iris occluding the pupil (Figure 1 A and B). The AC was almost absent even centrally and the IOL was not clearly seen. The iris appeared atrophic and iris vessels were dilated. His right eye examination was normal. The clinical findings suggested that this was not the typical occlusio pupillae as the pupil edge was not adherent to the IOL as the central AC was almost absent, and perhaps the membrane was contributing to the contracted pupil and intractable glaucoma.

He underwent removal of the membrane, synechiolysis, opening of the AC angles, peripheral iridectomy and reformation of the AC. Histology showed AE1/AE3 pancytokeratin-positive pseudostratified, non-keratinizing epithelial membrane confirming the diagnosis of epithelial downgrowth. At one-month post-surgery, there was no recurrence of epithelial down growth (Figure 2). The left VA improved to 6/15 with pinhole 6/12 and IOP was well controlled at 10 to 13 mmHg without treatment.

Unfortunately, the patient developed bullous keratopathy two years later due to recurrence of epithelial downgrowth on the cornea (Figure 3 A and B). He underwent intracameral 5-fluorouracil (5-FU) injection, removal of the membrane and descemet's stripping endothelial keratoplasty (DSAEK). Epithelial downgrowth recurred on the corneal graft 5 months later (Figure 4), and underwent repeated intracameral 5-FU injections monthly for 3 months. He subsequently underwent repeated DSAEK due to failure of the DSAEK graft. Intracameral 5-FU was not used since no further growth of membrane was detected. Three years post operatively, the best corrected VA was 6/90 and the graft remained clear without any recurrence of epithelial downgrowth.

¹Singapore National Eye Centre, Singapore, ²Singapore Eye Research Institute, Singapore, ³Department of Ophthalmology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, ⁴Ophthalmology and Visual Sciences Academic Clinical Research Program, Duke-NUS Graduate Medical School, Singapore



Figure 1A. Slit lamp photograph of the left eye showing extensive peripheral anterior synechiae and a translucent membrane (epithelial downgrowth, indicated by the arrow) on the anterior surface of the iris.



Figure 2. Slit lamp photograph of the left eye at 1-month post-surgery showing a deep anterior chamber, large peripheral iridectomy and clear cornea.

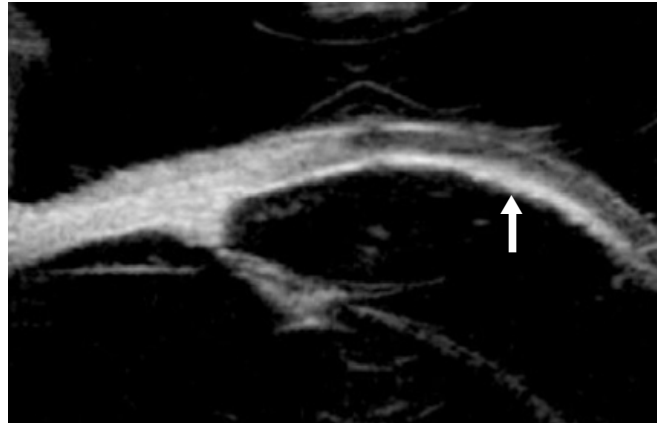


Figure 1B. This ultrasound biomicroscopy image shows the iris (arrow) plastered onto the posterior surface of the cornea due to the epithelial downgrowth.



Figure 3A. Slit lamp photograph of the left eye showing recurrence of epithelial downgrowth and bullous keratopathy. Note that the pupil is constricted and the peripheral iridectomy appears larger now due to contracture of the downgrowth.

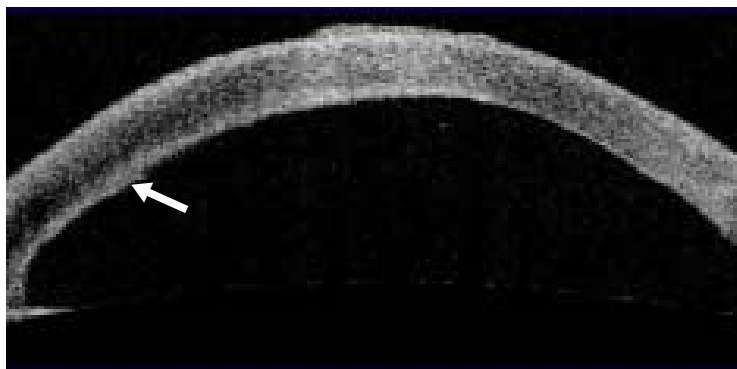


Figure 3B. Anterior segment optical coherence tomography showing recurrence of epithelial downgrowth on the posterior surface of the cornea.

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