Case Report

Descemet's Membrane Detachment : An Evidence of Old Ocular Trauma

Babitha Valiyaveettil, Sanaa Mohammed Konnakkodan, Arun Kumar
Department Of Ophthalmology, Government Medical college, Kozhikode, Kerala, India.

Abstract

A 60 year old female presented with defective vision both eyes and on examination was found to have a nebular corneal opacity in right eye which on evaluation was found to be a descemet's membrane detachment which developed post an episode of trauma to right eye she sustained 25 years back and which was forgotten till then. A diagnosis of old descemet membrane detachment was made. In view of the long duration before presentation and since the central visual axis was clear it was decided to manage the DMD conservatively without surgical intervention.

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Introduction

Descemet's Membrane Detachment can occur following intraocular surgery and also following trauma and corneal ectasia. Generally the corneal insult leading to DMD is evident and the patient presents early. We present a case of DMD in which the patient presented after 25 years with defective vision and the DMD was detected incidentally.

Case Report

A 60 year old female with history of hypertension, Type II Diabetes Mellitus presented with defective vision both eyes. Best Corrected Visual Acuity was FC at 2 metres in RE and 20/60 in LE. In the RE there was a nebular corneal opacity inferonasally extending from 4 - 7 O clock area, 2mm below the pupillary margin with a clear demarcation between normal cornea and opacity, extending peripherally upto limbus (Figure 1). On optical section it was shown that, a rolled membrane extended from the corneal border of opacity to the iris surface (Figure 2). In both eyes the pupillary reflexes were brisk. There was grade II nuclear sclerosis in RE and Grade I nuclear sclerosis in LE. Fundus examination showed Moderate NPDR with CSME RE and Moderate NPDR LE. Gonioscopy showed open angles with no abnormal membranes. Specular microscopy showed normal endothelial count in the central cornea Anterior Segment OCT was taken (Figure 3). AS-OCT showed an area of descemets membrane detachment with rolled edges. There was no corneal edema or hydrops.On further questioning the patient recalled a history of trauma in RE 25 years back which was minor and had not been evaluated till date. A diagnosis of old descemet membrane detachment was made. In view of the long duration before presentation and since the central visual axis was clear it was decided to manage the DMD conservatively without surgical intervention.

***Figure 1:** Anterior segment image on oblique illumination showing nebular opacity in inferonasal cornea*

***Figure 2:** Slit section showing rolled membrane extending from corneal surface towards iris*

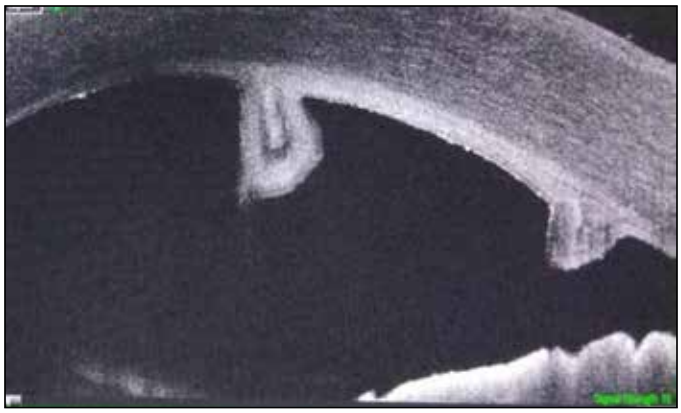

Figure 3: *AS-OCT image showing a hyper-reflective thickened membrane with rolled egdes.*

Discussion

The descemet's membrane detachment can be seen post cataract surgery and it is not a rare cause for postoperative corneal oedema following cataract surgery.[1,2] Other causes include birth trauma, blunt or sharp trauma, congenital glaucoma and keratoconus.[3] Very rarely late onset DMD can follow laser PI.[4] Cornea with abnormal fibrillary stromal attachment to descemet's membrane are prone to spontaneous DMD.[5,6] Various classification systems are available for DMD. Dr Jacob's Classification based on etio-pathogenesis, classifies DMD into rhegmatogenous, tractional,bullous and complex. Of these rhegmatogenous and tractional have a good prognosis.[7] Mackool and Holtz classified DMD into planar and nonplanar.[8] Detachments of the DM are classified as planar when there is ≤1 mm separation of the DM from its overlying stroma while nonplanar DMD exceed 1 mm of separation. They concluded that planar detachment has the better prognosis then nonplanar type. This classification helps in determining the prognosis of DMD (planar type resolve spontaneously and nonlinear has to repaired). AS OCT is considered as the investigation of choice for DMD.[9] UBM and Confocal microscopy can be used in case of DMD with corneal opacity. In case of planar DMD conservative treatment with topical steroids and hyperosmotic agents induce spontaneous reattachment within 3 months Interventional approach include intracameral air injection for small tear, descemetopexy (C3F8,SF6), transcorneal suturing for large detachments, Combined dscemetotomy with descemetopexy and penetrating keratoplasty are last options for DMD. Delayed diagnosis and treatment may compromise the corneal endothelium, predispose chronic corneal edema, and permanent vision loss.[10]

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Address for correspondence

Sanaa Mohammed Konnakkodan

Assistant Professor
Department Of Ophthalmology
Government Medical college,
Kozhikode, Kerala, India.
Email: sanaabasith@gmail.com

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