Pre-Descemet’s Hematoma in a Patient of Congenital Glaucoma with Descemet’s Detachment: A Unique Form of Hemorrhage

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Abstract. A unique form of anterior segment hemorrhage called Pre-Descemet’s hematoma is a previously unreported type of hemorrhage in which blood collects in the narrow space between the corneal stroma and detached Descemet’s membrane, which in our case was because of congenital glaucoma associated with Haab’s striae. [Ophthalmic Surg Lasers 2000;31:427-428]

INTRODUCTION

We report the case of a child with congenital glaucoma who had typical Haab’s striae with Descemet’s detachment and developed anterior segment hemorrhage that collected between the corneal stroma and detached Descemet’s membrane that we termed pre-Descemet’s hematoma.

CASE REPORT

A 12-year-old male presented to us with a history of allergic conjunctivitis and congenital glaucoma with glaucomatous optic atrophy in both eyes. His best-corrected visual acuity at presentation was 20/200 in both eyes. His intraocular pressure (IOP) was 28 mm Hg in both eyes with maximally tolerated antiglaucoma medications. His cup disc ratio was 0.9 in both eyes. Primary combined trabeculotomy-trabeceulectomy was performed in both eyes but in different operative sessions. Postoperatively, the IOP was in the low teens in both eyes without medications until the last follow-up. There was functioning filtering blebs and his visual acuities were maintained at 20/200 in both eyes. Figure 1 shows the slit lamp photograph of the right eye with Haab’s striae.

Figure 1. Slit lamp photograph of right eye showing Haab’s striae.

After an interval of 4 years, the patient presented with further diminution of vision in the left eye. His visual acuity in the right was 20/200; however, in the left eye it was only counting fingers with accurate projection of rays. His IOP was 12 mm Hg and 8 mm Hg in the right and left eye, respectively. There was no history of any ocular trauma or valsalva maneuver, but he gave a history of rubbing the eyes to get relief from severe itching. On examination, there was 1+ flare and cells in the anterior chamber and there was a collection of blood in the Descemet’s pocket, ie, between the corneal stroma and detached Descemet’s membrane. Figures 2 and 3 show the collection of blood in the Descemet's-stromal pocket. There was no blood in the anterior chamber angle or in the vitreous. The blebs were well functioning, the lenses were clear, and the cup to disc ratio was 0.9 in both eyes. He was treated with tapering doses of 0.1% betamethasone drops and
1% cycloptololate drops thrice daily. The hemorrhage took 5 weeks to disappear and the child regained the visual acuity of 20/200 in the left eye.

**DISCUSSION**

Unusual forms of anterior segment hemorrhage include intralenticular hemorrhage and endcapsular hematoma. Hemorrhage into the crystalline lens is a very rare entity but has been reported following ocular trauma and as a complication of glaucoma surgery.

Pre-Descemet's hematoma, to the knowledge of the authors, is a previously unreported type of hemorrhage in which blood collects in the narrow space between the corneal stroma and detached Descemet's membrane, which in our case was because of congenital glaucoma associated with Haab's striae. The amount of blood was small but it formed a horizontal line at the bottom of the pre-Descemet's area. The exact cause and site of bleeding is not known but probably because of severe rubbing there was bleeding from the trabeculectomy and/or iridectomy site and had trickled into the pre-Descemet's space instead of collecting in the anterior chamber angle. Isolation of the pre-Descemet's hematoma from the aqueous into the anterior chamber prolonged its presence. Since it was much below the pupillary axis it was not hampering the visual performance of the patient, which could be caused by anterior chamber reaction.

In 1988, Hagan reports a case of having large postoperative detachment of Descemet's membrane. Severe corneal edema extended into papillary space blurring vision and obscuring iris detail. Blood was present within the cornea at the lower edge of detachment. The cornea was clear inferiorly and at right where the Descemet's membrane is attached. The case was treated successfully by anterior chamber paracentesis and by using air to reattach Descemet's membrane. Three days following treatment a tiny air bubble remained superiorly. Corneal edema had cleared completely. Intracorneal blood remained as a diagonal line on the lower left cornea. Our case was unique in this sense: that there was significant gap between the corneal stroma and detached Descemet's membrane and blood was collected in the potential space between the two. The space between the corneal stroma and Descemet's membrane was maintained even after absorption of blood.

**REFERENCES**