

following cessation of toxic insult and vitamin B12 supplementation correlated with improvement in visual function. The eye with the greatest increase in RNFL thickness showed the most improvement suggesting that axonal swelling precedes irreversible damage and optic atrophy. In patients with TAA, RNFL thickness measured by OCT may be useful to predict the visual prognosis.

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Sir, Imaging of a traumatic cyclodialysis cleft in a child using slit-lamp-adapted optical coherence tomography

A cyclodialysis cleft establishes a communication between the anterior chamber and the suprachoroidal space. Clefts typically occur after trauma or intraocular surgery and may be complicated by a shallow anterior chamber, hypotony, and maculopathy.¹ Slit-lamp-adapted optical coherence tomography (SL-OCT) is a light-based, non-invasive non-contact method of obtaining cross-sectional images of the anterior segment that provides rapid and objective information on the anterior segment dimensions and angle configuration.^{2,3} We used SL-OCT (1310-nm diode laser, optical axial image resolution <25 μm , and lateral resolution of 20–100 μm ; Heidelberg Engineering GmbH, Dossenheim, Germany) to detect a cyclodialysis cleft, and accompanying ciliochoroidal effusion after blunt trauma in an 8-year-old child.

Case report

An 8-year-old boy presented with blurred vision and hypotony 1 month after blunt trauma to the right eye. Best-corrected visual acuity was 20/200 and intraocular pressure was 1 mmHg. Slit-lamp biomicroscopy revealed striate keratopathy with moderate shallowing of the anterior chamber, without iridocorneal contact. The lens was clear and retinal folds were seen in the macula. Gonioscopy revealed an open angle with a possible cyclodialysis cleft nasally, but the view was limited by corneal folds and patient discomfort. SL-OCT imaging in different positions of gaze showed a cyclodialysis cleft at the 3-o'clock position (Figure 1) with a 360° choroidal effusion that was confirmed by ultrasound biomicroscopy (UBM; axial resolution 50 μm , model P40, Paradigm Medical Industries Inc, Salt Lake City, UT, USA). In both UBM and SL-OCT, there was no evidence of ciliary body detachment in other clock hour positions (eg, 6-o'clock position, Figure 2).

Comment

Cyclodialysis may be a sight-threatening condition requiring accurate identification and timely



Figure 1 (a) UBM image showing the cyclodialysis cleft at 3-o'clock position (arrow). (b) SL-OCT image showing the cyclodialysis cleft at the same position (arrow). (c) Well-defined cleft (arrow) using SL-OCT colour image function. AC = anterior chamber; CB = ciliary body; CE = choroidal effusion; S = sclera.

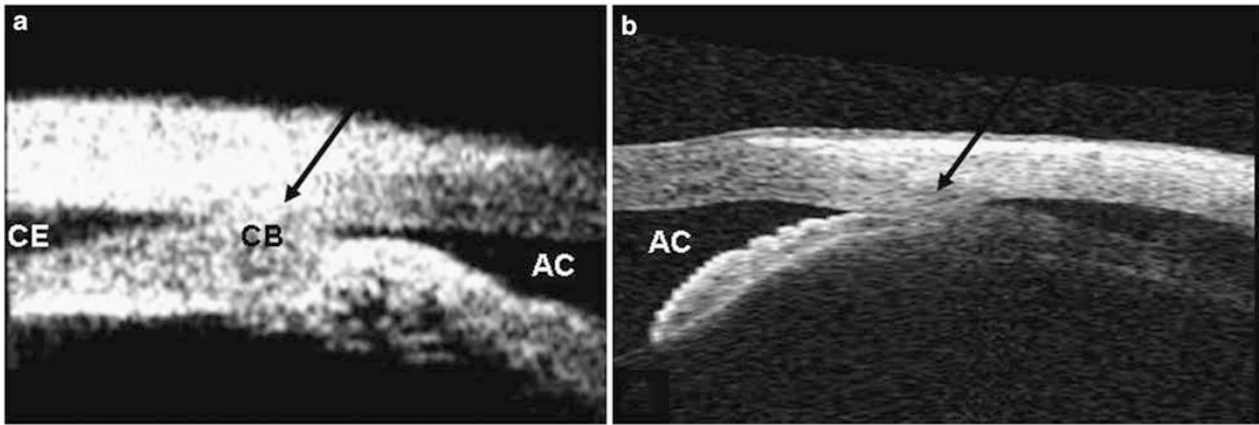


Figure 2 (a) UBM image showing choroidal effusion with no ciliary body detachment at 6-o'clock position (arrow). (b) SL-OCT image showing choroidal effusion with no ciliary body detachment at the same position (arrow). AC = anterior chamber; CB = ciliary body; CE = choroidal effusion.

intervention.¹ UBM has been used for diagnosis, when gonioscopy is not possible due to a shallow anterior chamber or hazy media.⁴ Injection of viscoelastic material into the anterior chamber may facilitate gonioscopic visualization when other methods fail.⁵ Gonioscopy and UBM may be difficult to perform in younger children. SL-OCT is atraumatic, rapid, and slit-lamp-adapted. Although the SL-OCT provides images with a higher axial resolution, a major limitation compared to the UBM is its inability to visualize structures posterior to the iris.

In our patient, the cleft was well defined and easily located by SL-OCT, producing images similar in quality to those produced by UBM, without risk of further ocular injury or patient discomfort. Testing can be repeated frequently, with minimal difficulty, to follow the ocular response to intervention. Lastly, given that SL-OCT is easily performed in the upright position (compared with majority of UBM devices performed in the supine position), the findings may more likely reflect gonioscopic and slit-lamp biomicroscopic clinical findings.

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Sir,
Novel mutation in PAX3 gene in Waardenburg syndrome accompanied by unilateral macular degeneration

Waardenburg syndrome (WS) is a congenital pigmentary anomaly that affects the eye, hair, and skin. It is accompanied by facial abnormalities and deafness.¹ WS is clinically and genetically heterogeneous, and WS type 1 (WS1) is characterized by dystopia canthorum. WS1 results from mutations in the PAX3 gene.² We report a patient with WS1 who presented with unilateral vision decrease and a novel mutation in the PAX3 gene.