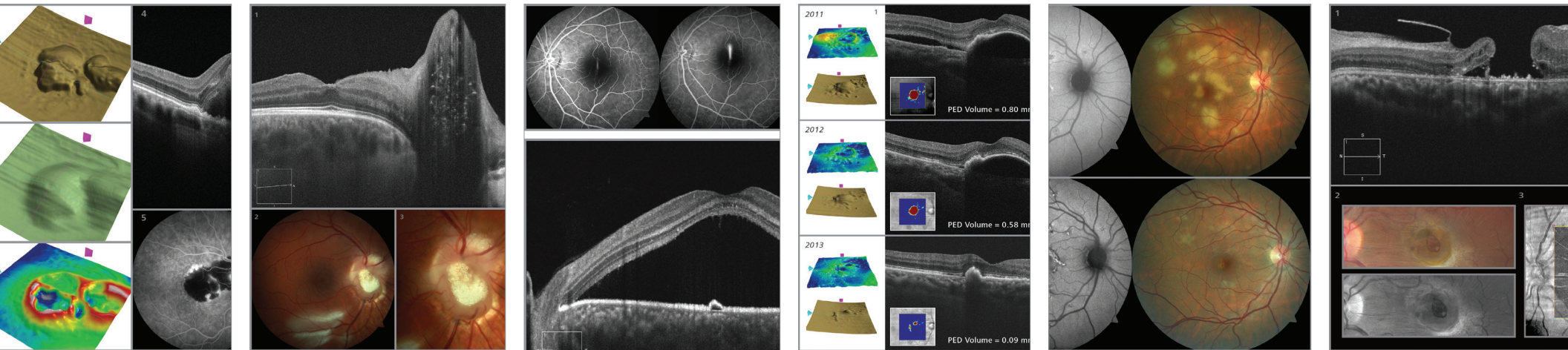
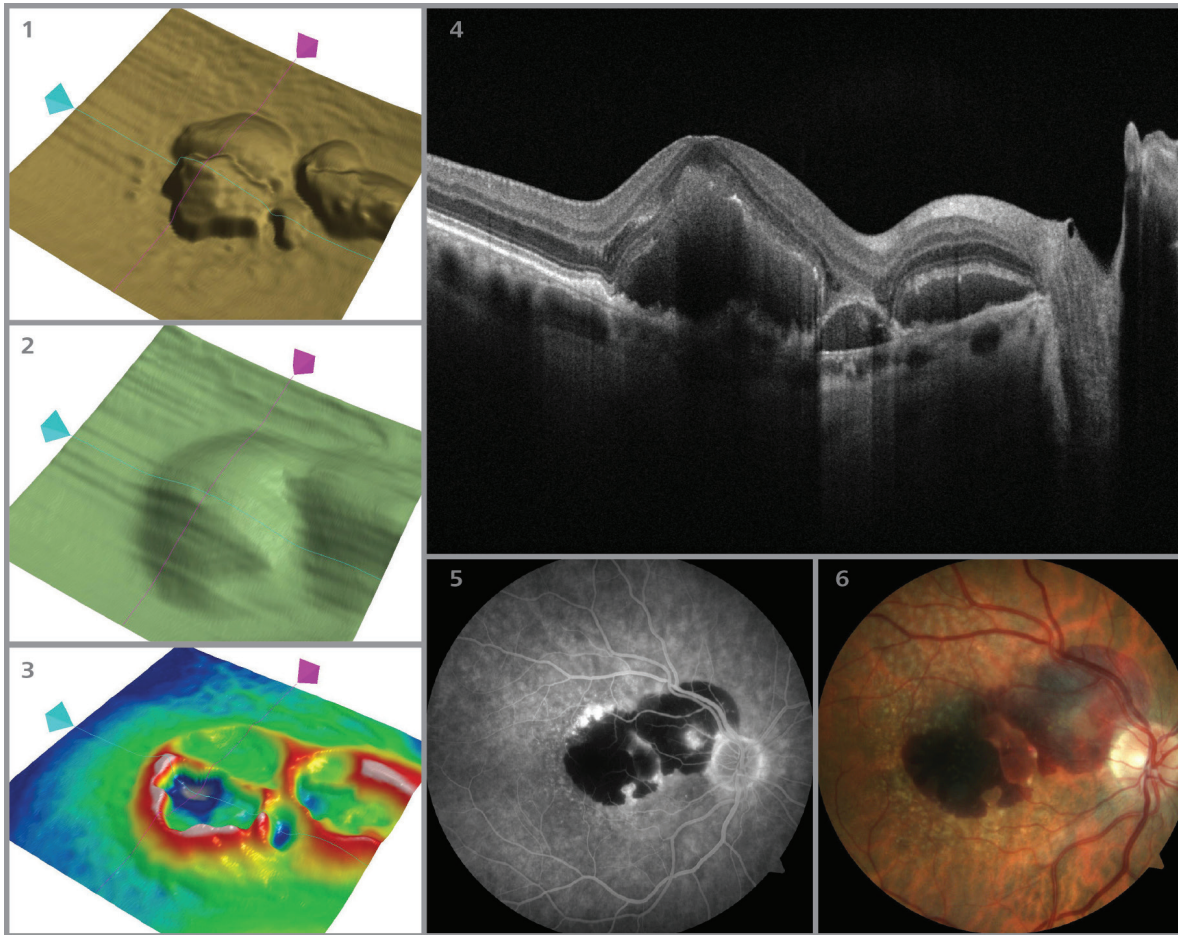


A Collection of Feature Cases and Diagnostic Images



FEATURED CASE BY ZEISS — ASSESS AMD



Images Courtesy of

NC Retina Associates | Bill Gavalier, Ophthalmic Photographer

Captured with ZEISS CIRRUS® photo 800

(1) Macular Thickness Map; (2) ILM Segmentation Map; (3) RPE Segmentation Map;
(4) High-resolution OCT B-scan; (5) Angiogram; (6) Color Fundus

DIAGNOSIS

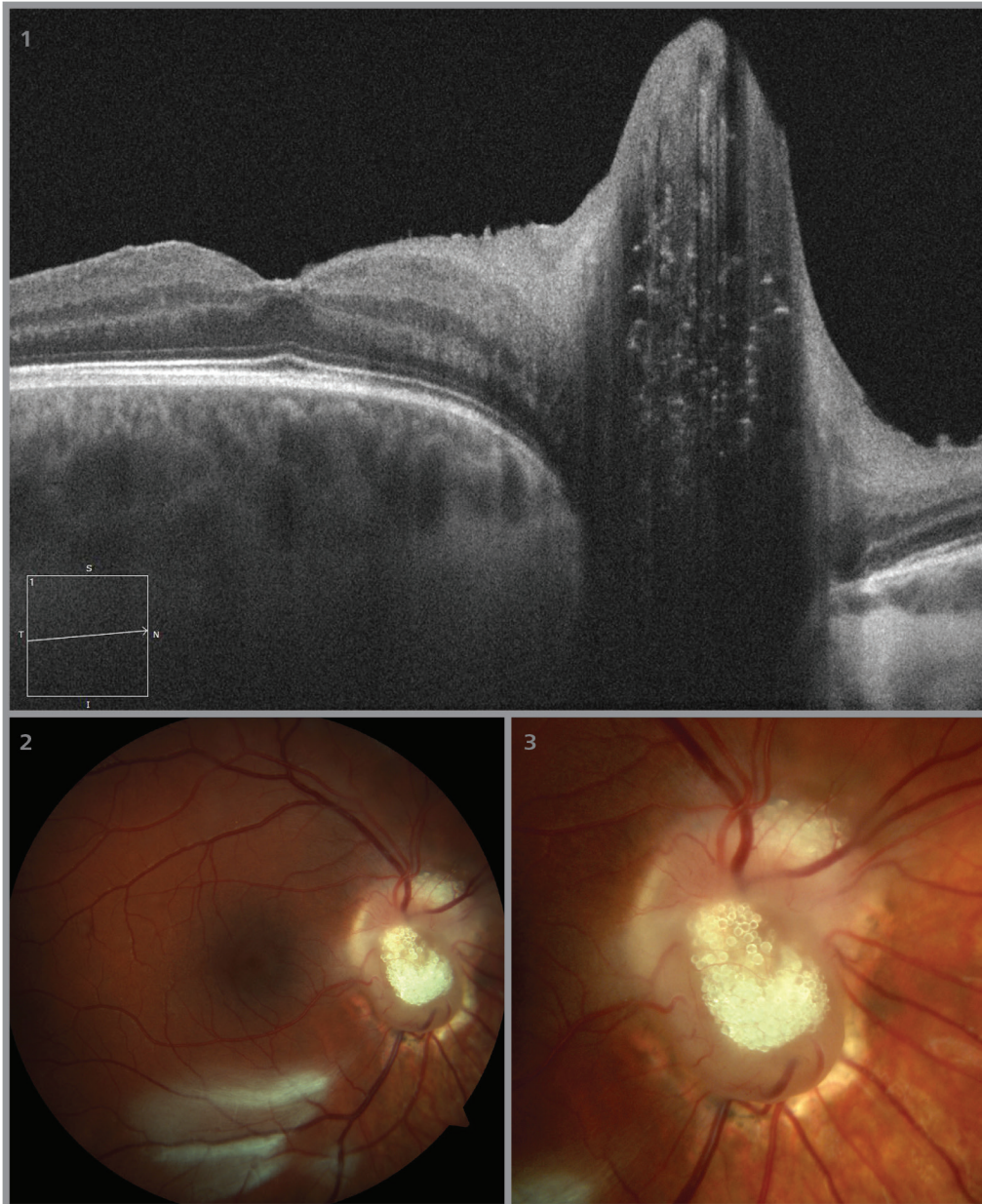
Exudative AMD with Subretinal Hemorrhage

SUMMARY

A 67-year-old patient presented with sudden onset of central vision loss in the right eye. All images were acquired on the CIRRUS™ photo 800, which provides versatile visualizations and a comprehensive view of the patient's condition. The fundus photo reveals two foci of subretinal hemorrhage with varying degrees of thickness and multiple large soft drusen. The angiogram reveals blockage due to subretinal hemorrhage and late leakage due to choroidal neovascularization. The high-resolution OCT image excellently delineates disruption of intraretinal architecture, subretinal blood and pigment epithelial detachment not visualized on other images. Powered by the CIRRUS SmartCube™, the segmented layer maps (Macular Thickness, ILM, and RPE) allow for quick recognition of any disruptions in the retinal layers.



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DIAGNOSIS

Astrocytic Hamartoma

SUMMARY

A 14 year-old girl was referred for an optic nerve head lesion in her right eye. She reported occasional discomfort in the right eye but had no other complaints.

Visual acuity was 20/40 OD and 20/20 OS. Intraocular pressure was 17 OU and slit lamp exam showed no abnormalities. Dilated fundus examination of the right eye showed an astrocytic hamartoma on the optic nerve and an area of myelinated nerve fiber layer along the inferior arcade. Dilated fundus exam of the left eye was unremarkable. OCT and color photos, and fundus autofluorescence were performed. Patient was referred for work up of tubular sclerosis.

Images Courtesy of

Medical College of Wisconsin

Kimberly Stepien, MD | Mara Goldberg, CRA OCT-C

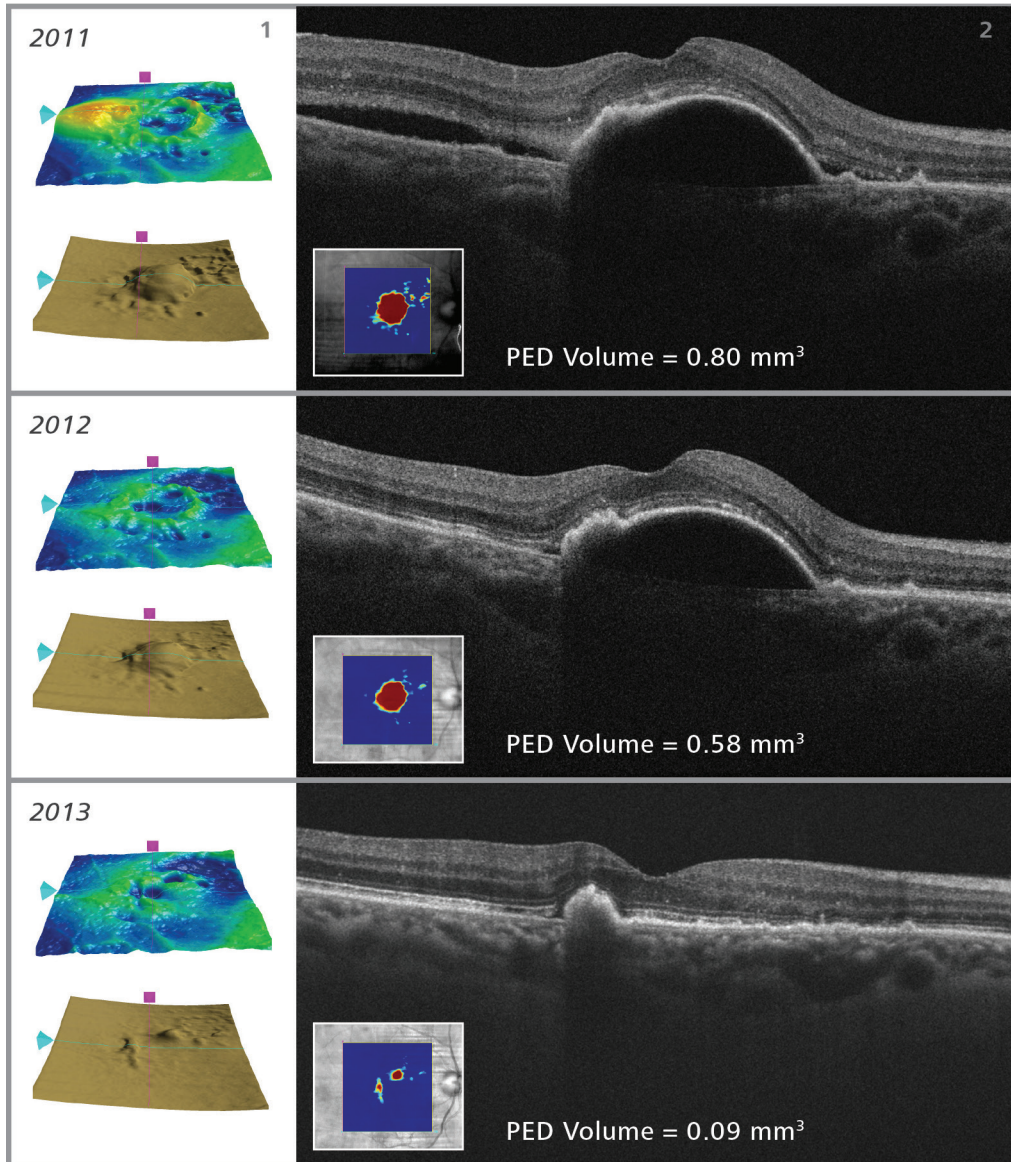
Captured with ZEISS CIRRUS™ HD-OCT & VISUCAM^{NM/FA}

(1) Smart HD B-scan; (2) Color Fundus; (3) Color Fundus



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FEATURED CASE BY ZEISS — AMD THERAPY



DIAGNOSIS

Neovascular AMD and associated Pigment Epithelial Detachment

SUMMARY

A 77-year-old patient presented in 2011 with neovascular AMD and an associated pigment epithelial detachment (PED). This patient was treated with intravitreal anti-VEGF and demonstrated a good response to therapy. High-definition OCT raster scans clearly illustrate the patient's response to therapy over the period of two years. However, the subtle effects of the drug observed between years 2011 and 2012 are more clearly identified by the Advanced RPE Analysis that demonstrates reduction of the PED and the sub-retinal fluid. This analysis is based on the CIRRUS™ SmartCube™ scan (512 x 128 or 200 x 200), and provides information on RPE elevation (area and volume). The Advanced RPE Analysis clinical application allows careful analysis of PEDs, assessment of change over time, and the ability to track response to therapy.

Images Courtesy of

Bascom Palmer Eye Institute

Mariana Rossi Thorell, MD | Philip Rosenfeld, MD, PhD

Captured with ZEISS CIRRUS™ HD-OCT

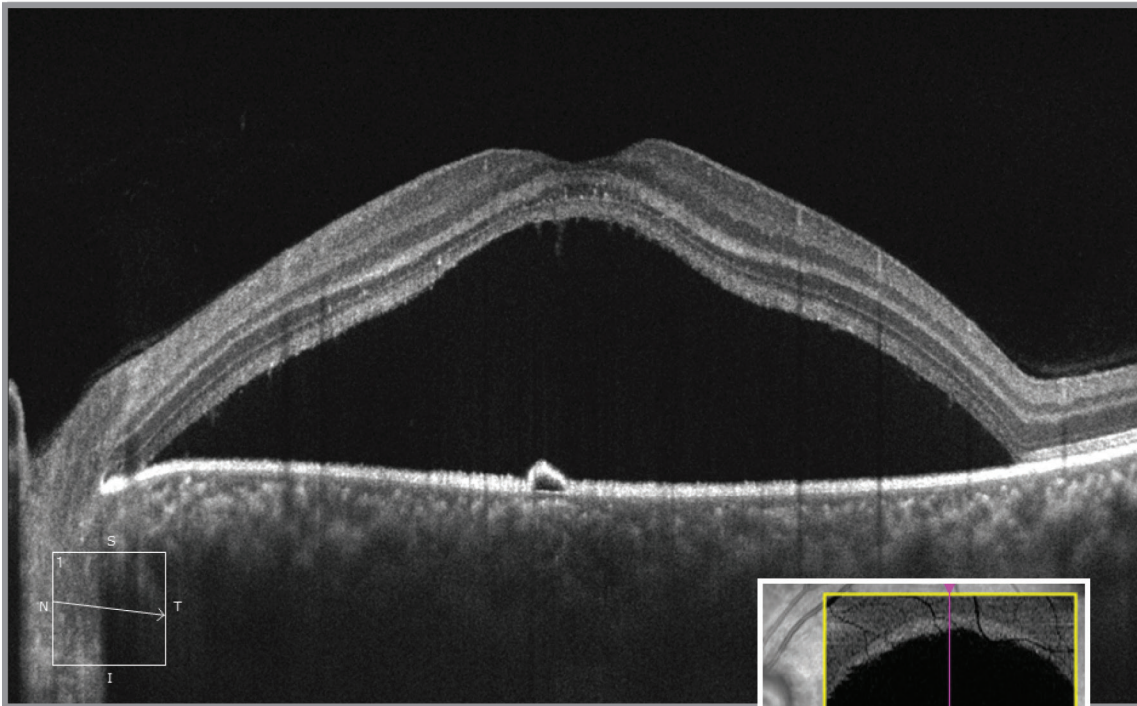
(1) Macular Thickness Map & RPE Segmentation Map;

(2) HD-OCT raster scan & Advanced RPE Analysis



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FEATURED CASE BY ZEISS — RETINOPATHY



DIAGNOSIS

Central Serous Retinopathy

SUMMARY

A 41-year-old, African-American male presented with worsening blurry and darkened central vision of two weeks duration. After clinical and imaging evaluation, the patient was diagnosed with central serous retinopathy in the left eye. The high-resolution OCT image clearly shows substantial subfoveal fluid. The angiogram reveals a classic area of central pinpoint leakage with smokestack pattern in later phases. En face OCT shows slab area corresponding to the central pigment epithelial detachment (PED).

Images Courtesy of

North Carolina Retina Associates | Vivian T. Nguyen, BS

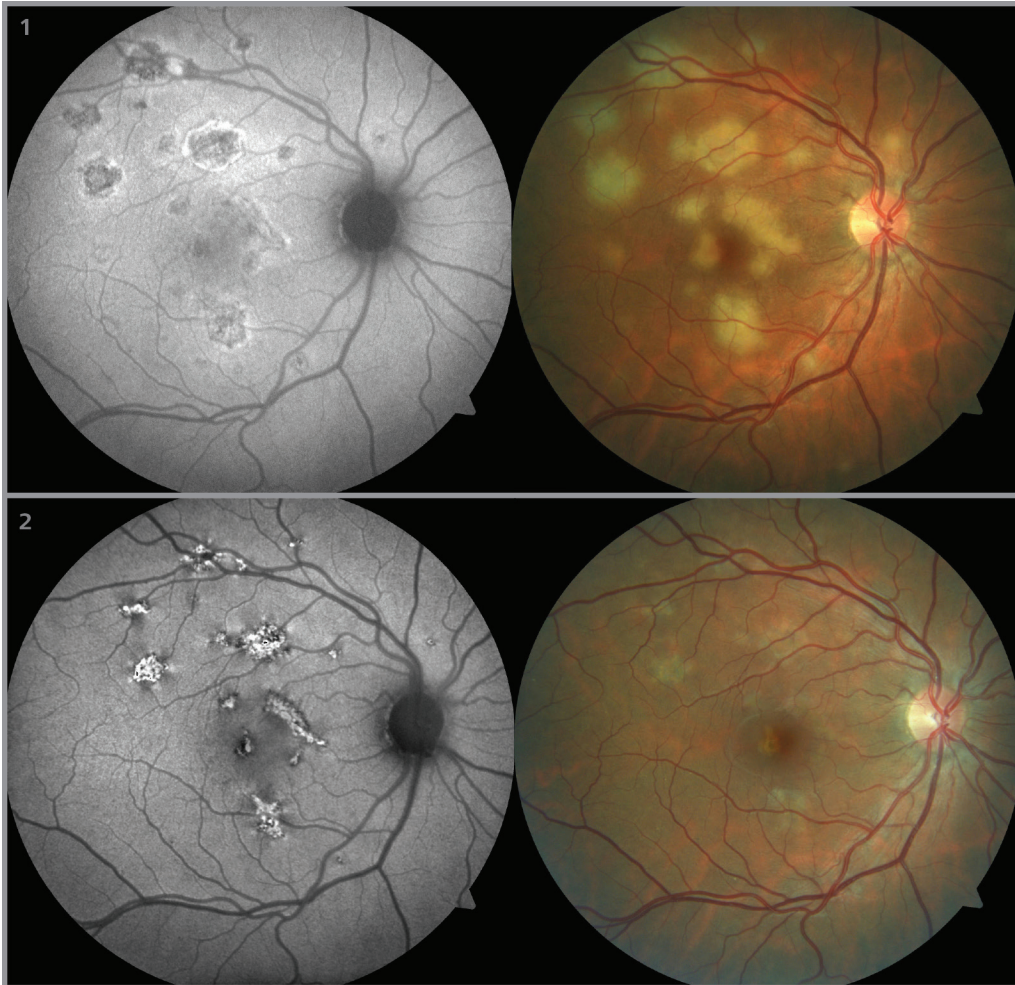
Captured with ZEISS CIRRUS™ HD-OCT

(1) Angiogram reveals central pinpoint leakage with smokestack pattern in later phases; (2) raster scan shows subfoveal fluid, while the En face OCT shows the slab area corresponding to the PED seen in B-scan



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FEATURE CASE — TREAT AMPPE



Images Courtesy of
North Carolina Retina Associates | Rebecca Manning, MD; Holly Fields, COA

Captured with ZEISS VISUCAM^{MM/FA}

(1) Initial Presentation: Fundus Autofluorescence, Color Fundus;

(2) 12 Weeks Post Presentation: Fundus Autofluorescence, Color Fundus

DIAGNOSIS

Acute Multifocal Posterior Placoid Epitheliopathy

SUMMARY

A 34-year-old white female presented with a 1-week history of blurry vision and seeing “black spots” in her vision. She also reported 1 week of headaches that began concurrently with the visual changes. On exam, she was 20/25 OU with no afferent pupillary defect (APD). She had no anterior chamber inflammation but had 1+ vitreous cell OU. Color fundus photographs at this time reveal deep white retinal lesions scattered throughout the posterior pole. Fundus Autofluorescence (FAF) revealed hypoautofluorescent lesions with hyperautofluorescent areas surrounding the lesions, showing Acute Multifocal Posterior Placoid Epitheliopathy (AMPPE) lesions. AMPPE is an idiopathic inflammatory condition affecting the RPE that can be accompanied by cerebral vasculitis (ruled out after neurologic evaluation).

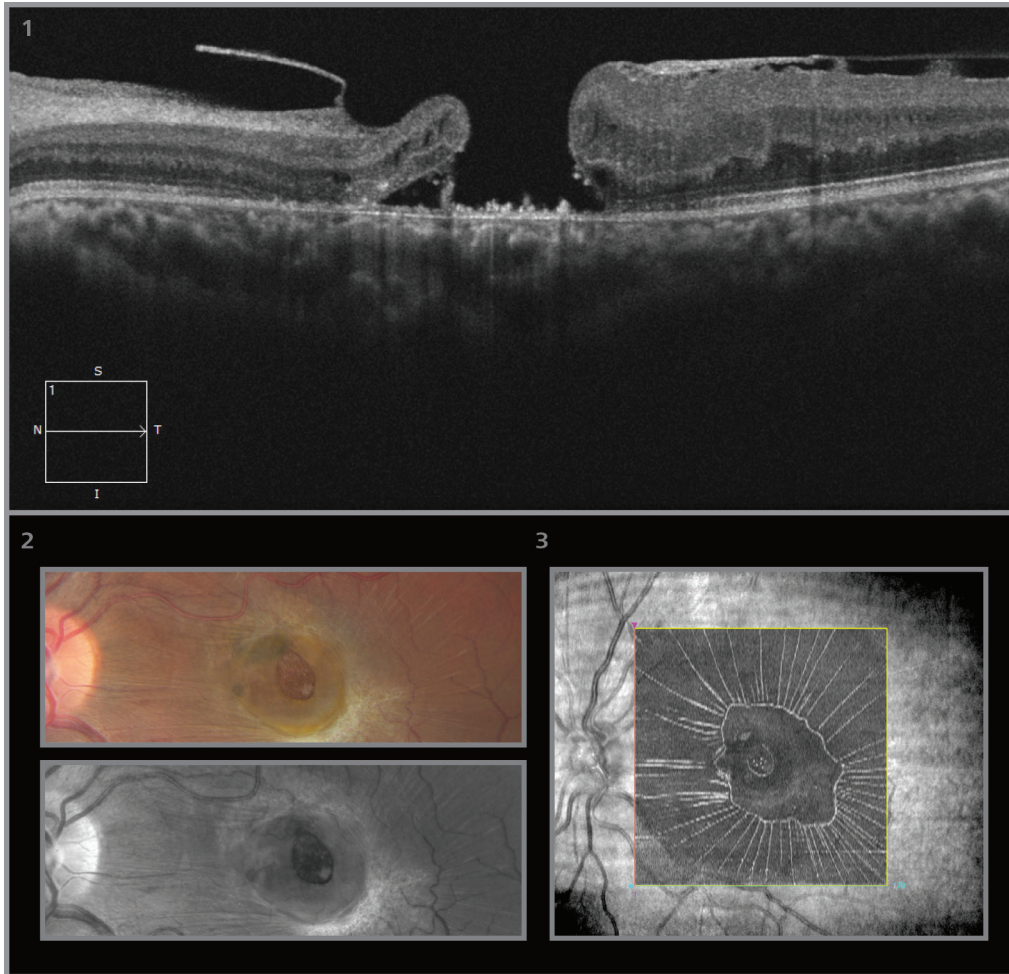
Since she had subretinal fluid on OCT in her right eye, patient was started on 60 mg of oral prednisone that was tapered over a 6 week period. Her symptoms resolved over this time period and she has had no recurrence. Her vision returned to 20/20 OU. Color fundus photographs (12 weeks post presentation) reveal resolving AMPPE lesions. The deep white retinal lesions have become pigmented. FAF from this time also reveals hyperautofluorescent lesions, indicating resolving AMPPE.

Note: Patient declined fluorescein angiography due to breast feeding at the time



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FEATURE CASE — VISUALIZE RETINAL DAMAGE



DIAGNOSIS

Traumatic Macular Hole

SUMMARY

Patient suffered a macular hole secondary to blunt trauma. The brilliant B-scan acquired on the CIRRUS™ HD-OCT allows for clear visualization of the macular hole with overlying epiretinal membrane. These data also show neuroretinal thinning on the nasal side of the hole with hypertrophy of the retinal pigment epithelium within the hole. The fundus photographs show amount of pigment loss or RPE damage along with retinal striae. The en face image provides an additional way to visualize the retinal damage, more clearly defining the retinal striae in the internal limiting membrane radiating out from the macular hole.

Images Courtesy of

Flaum Eye Institute University of Rochester

David A. DiLoreto, Jr., MD, PhD | Taylor Pannell, CRA

Captured with ZEISS CIRRUS™ HD-OCT

(1) Hi-definition OCT B-scan; (2) color and red-free fundus images; (3) En face ILM overlay



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Call for cases and images

If you have a collection of brilliant images taken with a ZEISS imaging instrument and unique cases like you would like considered for use in a ZEISS publicaiton, please visit www.zeiss.com/best-shot and upload your prize ophthalmic images taken with a CIRRUS™ HD-OCT, CIRRUS photo, FF450, VISUCAM or other ZEISS retinal imaging device. Submissions considered for use will be eligible for an honorarium.*