Sickle Cell Retinopathy

Retinal Exam Advanced Learning [R.E.A.L.] Images Case Study Program

In an effort to offer continuing education and promote shared learning among our partners, Optos has created the R.E.A.L. Images Program. As part of this effort, we are looking for interesting case studies that demonstrate "real-life" cases where using the **opto**map® Retinal Exam made a difference in a patient's life.

"**opto**map® on this patient and many more has resulted in an excellent teaching tool for the interns we have in our office. It allows us to review cases together."

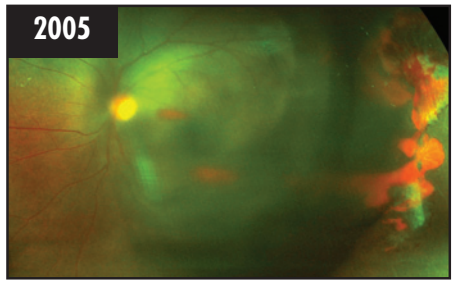
– Richard Jacobson, O.D.

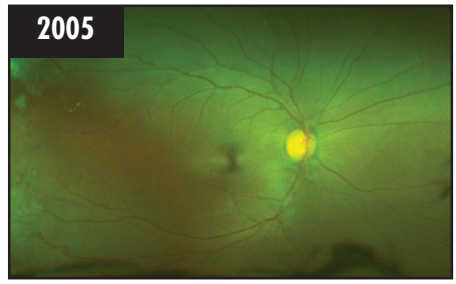
Richard Jacobson, O.D.

Preston Linley, Intern

Southern College of Optometry Intern Preston Linley and Dr. Jacobson Case Study

A 35-year-old nursing student reported to the emergency room (ER) on 9/20/05. She came in complaining of a "gel" in her left eye and it was associated with a slight headache behind both eyes. She described the gel as a moderate mass that floated in her vision and that had not dissipated with time. She graded the associated pain behind her eyes as a 2-3 on a 1-10 scale. The ER called the on-call eye doctor, Dr. Jacobson, and intern Preston Linley to come in and assess her condition. The patient was diagnosed with Sickle Cell Retinopathy OU with OS being more severe then OD. A new extensive vitreal hemorrhage was noted causing decreased visual acuity in the OS.





optomap® images of the right and left eye reveal Sickle Cell Retinopathy OU with symptomatic vitreal hemorrhage OS.

Pertinent History

The patient's initial visual acuities were 20/15 OD and 20/20 OS. The patient upon questioning reported an ocular history that was unremarkable, and a systemic history remarkable for sickle cell disease. Extra ocular motilities were full with denial of pain or diplopia reported by the patient, and no evident proptosis or mass was visible. Pupils were equally round, reactive to light, and showed no evident relative afferent pupillary defect. Anterior segment evaluation with a biomicroscope revealed normal lids, lashes, and lacrimal gland OU. Palpebral and bulbar conjunctivas were unremarkable OU. Corneas were clear in all layers OU, and the anterior chambers were open and quiet. The iris was normal in morphology OU. Lenticular evaluation revealed a clear lens OU. An **opto**map® Retinal Exam, dilation with one drop of Cyclogel, a biomicroscope, Super Field fundus lens, and a 20D lens were used to look at the pathology in 3D. Posterior segment evaluations were limited due to a poor dilation, and the patient's extreme photophobia. Limited views were obtained but were remarkable for superior nasal sea fan retinopathy OD and superior temporal sea fan retinopathy with associated hemorrhage OS.

The patient's follow up visual acuities a day later were 20/20 OD, but the OS had now dropped to 20/200. Extra ocular motilities, pupils and anterior segment evaluation was unchanged from the previous ER evaluation. Intraocular pressures were 16mmHg OD and 17mmHg OS at 1510 hours. The patient was dilated with one drop of 1% Tropicamide and 2.5% Phenelepherine. Posterior segment evaluation of the OD was remarkable for extensive sea fan retinopathy in the temporal peripheral retina. There was also a questionable minor hemorrhage located superior temporal along the edge of one of the sea fan areas. Posterior segment evaluation of the OS was remarkable for extensive sea fan retinopathy along the temporal peripheral edge with extensive pre-retinal and vitreal hemorrhages. The vitreal hemorrhage was extensive enough to involve the visual axis causing the further decrease in visual acuity.

optomap® Impact

Dr. Jacobson and intern Preston Linley used the **opto**map® *plus* Medical Retinal Exam to document the examination and immediately referred the patient to a retinal specialist for treatment.

Follow-up Treatment

The retinal specialist treated the patient with pan retinal photocoagulation (PRP) OS. The posterior segment will be followed closely for possible PRP in the OD, and a vitrectomy, if scaffolding with associated traction becomes evident.

Learn How

For more information on this program and to download the submission form, visit our website at **www.optos.com**, sign into the Partner Login area and go to Case Studies.

The R.E.A.L. Images Case Study Program is sponsored by a grant from Optos.

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