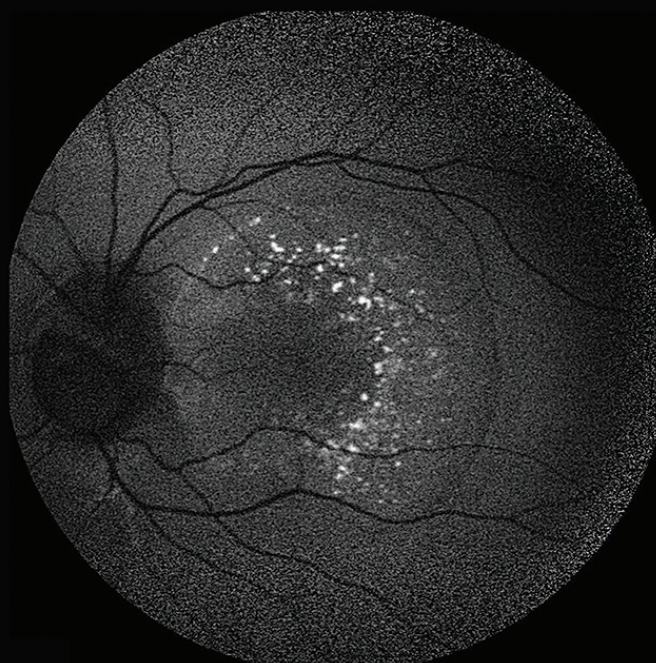
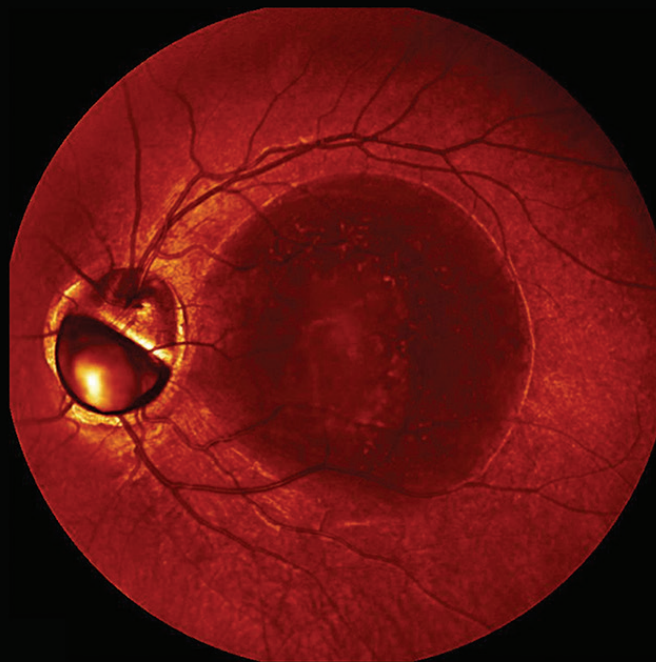
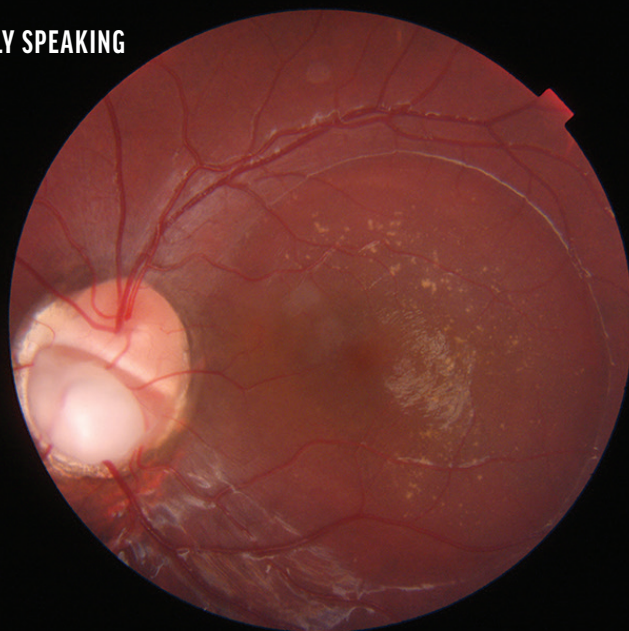




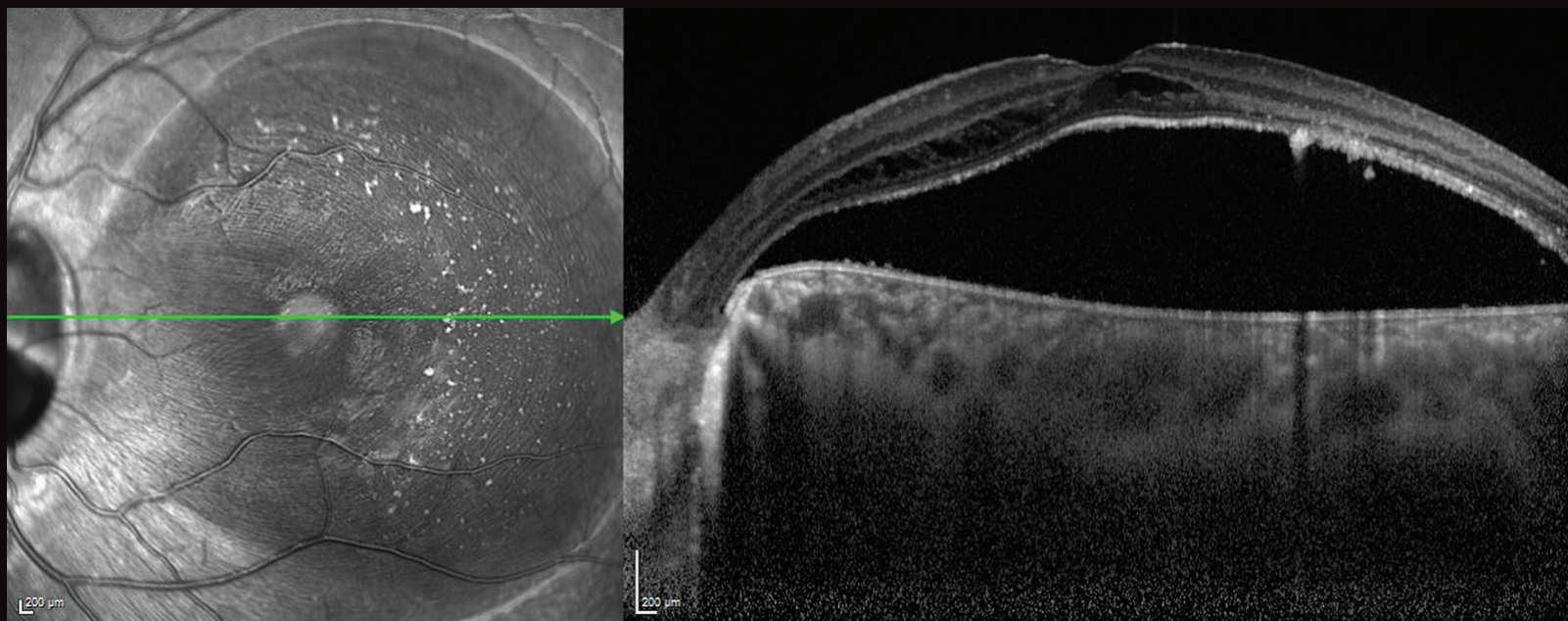
A CASE OF OPTIC FISSURE FAILURE



**BY SEFIK CAN IPEK, MD; AYLIN YAMAN, MD; AND ALI OSMAN SAATCI, MD;
EDITED BY MANISH NAGPAL, MBBS, MS, FRCS**

Optic disc coloboma, macular schisis, and serous detachment were to blame for this patient's poor vision in the left eye.

A 4-year-old boy was referred to us from an outside clinic for further evaluation of his left eye, which was the only eye with good vision. VA in the left eye was 4/10 based on the Allen chart. The anterior segment examination was unremarkable, but dilated fundus examination revealed a



disc coloboma inferiorly approximately 0.50 disc diameters in size, a serous macular detachment, and multiple yellow deposits in the subretinal space (Main Figure, Left).

Spectral-domain OCT confirmed the serous retinal detachment, macular schisis, and hyperreflective material in the inner segment/outer segment layer, most likely due to photoreceptor degeneration (Figure, Above).

As the left eye was the child's good eye, pars plana vitrectomy was offered to the family to possibly preserve the vision; however, the parents withheld the surgical option and elected to wait.

DISCUSSION

Optic nerve coloboma (both typical and atypical), optic pit, morning glory disc anomaly, and extrapapillary cavitation comprise a continuum of anomalies that arise from the failure of the optic fissure to close during embryogenesis.¹ Serous maculopathy occurs in more than 50% of eyes with cavitory disc anomalies.^{2,3}

The exact origin and pathogenesis of the intra- and subretinal fluid associated with these conditions remain unknown. Researchers postulate that either vitreous or cerebrospinal fluid might be the underlying pathology causing the macular detachment.⁴

No consensus exists on treatment timing and modality. Laser photocoagulation, pars plana vitrectomy with or without internal limiting membrane peeling, intravitreal gas tamponade, subretinal drainage, inner retinal fenestration, and macular buckling are among the surgical methods that have been described.^{1,5,6} ■

1. Kiang L, Johnson MW. Formation of an intraretinal fluid barrier in cavitory optic disc maculopathy. *Am J Ophthalmol*. 2017;173:34-44.
2. Brown GC, Shields JA, Goldberg RE. Congenital pits of the optic nerve head. II. Clinical studies in humans. *Ophthalmology*. 1980;87(1):51-65.
3. Haik BG, Greenstein SH, Smith ME, Abramson DH, Ellsworth RM. Retinal detachment in the morning glory anomaly. *Ophthalmology*. 1984;91(12):1638-1647.
4. Jain N, Johnson MW. Pathogenesis and treatment of maculopathy associated with cavitory optic disc anomalies. *Am J Ophthalmol*. 2014;158(3):423-435.
5. Kalogeropoulos D, Ch'ng SW, Lee R, et al. Optic disc pit maculopathy: a review. *Asia Pac J Ophthalmol (Phila)*. 2019;8(3):247-255.
6. Uzel MM, Karacorlu M. Optic disk pits and optic disk pit maculopathy: A review. *Surv Ophthalmol*. 2019;64(5):595-607.

SEFIK CAN IPEK, MD

- Fellow, Department of Ophthalmology, Agri Research and Training Hospital, Agri, Turkey
- sefikcanipek@gmail.com
- Financial disclosure: None

SECTION EDITOR MANISH NAGPAL, MBBS, MS, FRCS

- Senior Consultant, Retina and Vitreous Services, The Retina Foundation, Ahmedabad, India
- drmanishnagpal@yahoo.com
- Financial disclosure: Consultant (Nidek)

ALI OSMAN SAATCI, MD

- Professor, Department of Ophthalmology, Dokuz Eylul University, Izmir, Turkey
- Financial disclosure: None

AYLIN YAMAN, MD

- Professor, Department of Ophthalmology, Dokuz Eylul University, Izmir, Turkey
- Financial disclosure: None

If you have an image or images you would like to share, email Dr. Nagpal.

Note: Photos should be 400 dpi or higher and at least 10 inches wide.