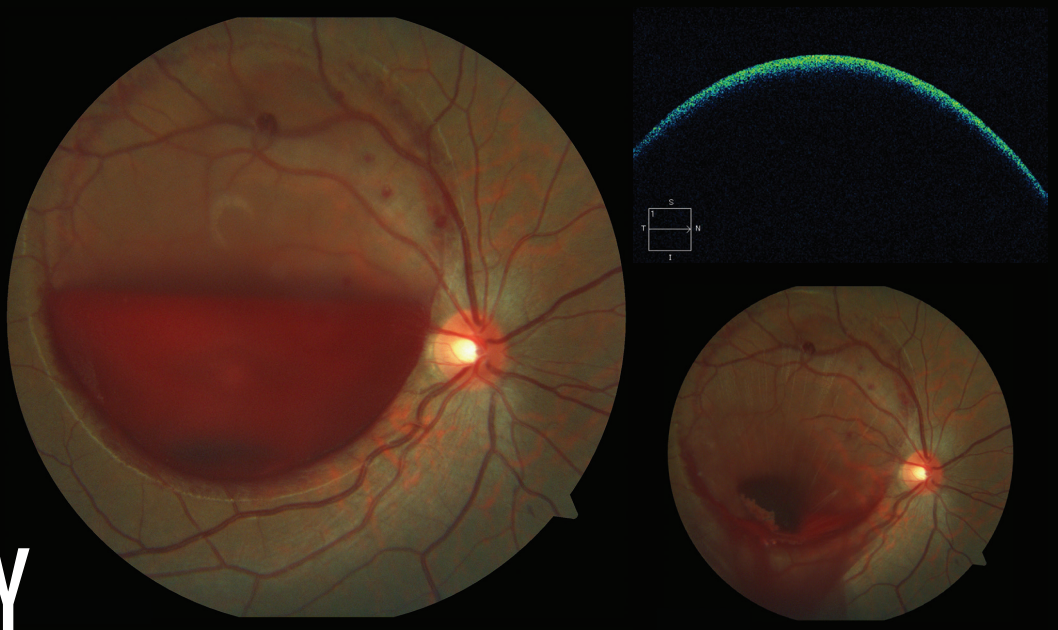
TRACKING A CASE OF VALSALVA RETINOPATHY



A new predictive tool could help clinicians catch complications after laser membranotomy.

BY KUSHAL DELHIWALA, MBBS, MS, FMRF, FICO

A 26-year-old man presented with sudden, painless loss of central vision in the right eye for 1 day following an episode of vomiting. BCVA was 20/200 OD. Fundus evaluation revealed a massive boat-shaped premacular hemorrhage in the right eye associated with a glistening reflex, suggestive of blood in the sub-internal limiting membrane (ILM) space (Main Figure).

The spectral-domain OCT (SD-OCT) raster scan showed the convex premacular hemorrhage with shadowing beneath (Inset, Top). The patient was diagnosed with Valsalva retinopathy and underwent same-day laser membranotomy.

FOLLOW-UP

Following membranotomy, blood was noted trickling inferiorly into the vitreous (Inset, Bottom). BCVA improved to 20/30 OD at 10 days after membranotomy and 20/20 OD at 40 days. There was gradual complete drainage of the premacular hemorrhage along with ILM striations but no metamorphopsia. The associated inferior vitreous hemorrhage resolved by 6 weeks.

SD-OCT at 10 and 40 days after membranotomy showed a healthy foveal dip and a persistent hyporeflective premacular sub-ILM cavity measuring 588 µm and 820 µm, respectively (Figure, next page, Top and Top Middle). The ILM architecture and the height of the premacular sub-ILM cavity were measured by a vertical line perpendicular to the tangential lines passing through the foveola and the highest point of the sub-ILM cavity.

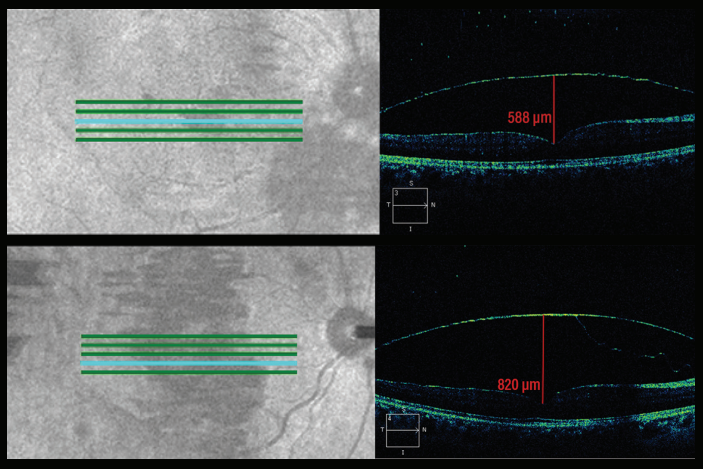
SD-OCT also revealed an unsealed laser perforation site in the inferotemporal perifoveal region and the absence of a posterior vitreous detachment (PVD).

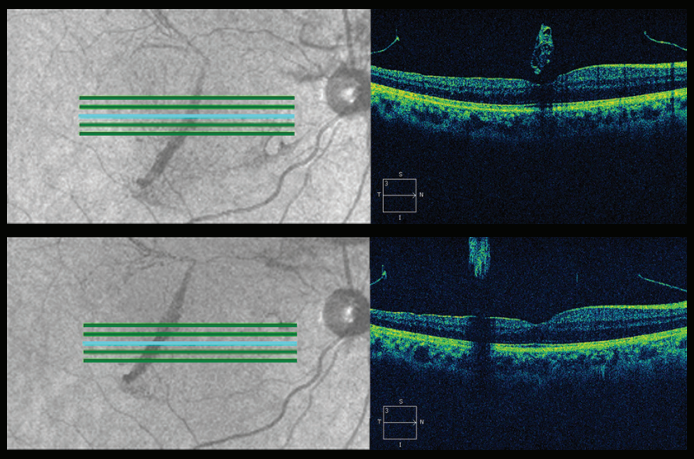
At 4 months, SD-OCT revealed wrinkling and falling back of the ILM toward the surface of the neurosensory retina, corresponding with posterior hyaloid detachment from the ILM marked by two separate hyperreflective layers. The sub-ILM cavity height increased significantly to 820 µm.

At 10 months, the sub-ILM cavity collapsed with a curled-up, mobile ILM remnant hanging above the fovea due to focal retinal attachment, suggestive of complete macular PVD (Figure, next page, Bottom Middle). At 24 months, BCVA was stable at 20/20 OD without metamorphopsia. SD-OCT showed persistence of the ILM remnant with focal retinal attachment (Figure, next page, Bottom).

DISCUSSION

Valsalva retinopathy is commonly characterized by subhyaloid/sub-ILM hemorrhage.[1,2] It occurs following a sudden rise in intrathoracic pressure (Valsalva maneuver) that transmits to the superficial retinal vessels, leading to their rupture. A persistent premacular sub-ILM cavity following laser membranotomy in Valsalva retinopathy has been reported with varied hypotheses.[3,4] Firm adhesion of the posterior hyaloid to the ILM in young patients can cause a sub-ILM cavity in the acute stage. Increased height of this cavity over 6 to 8 months, measured on OCT, can be a predictor of evolving PVD and subsequent resolution of the cavity. ■





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