The RTVue FD-OCT as an Aid in Performing Complex Membranectomies

Ultrahigh-speed and high-resolution pictures revealed cellophane membranes and traction.

BY JAY FLEISCHMAN, MD

I have used the Optovue RTVue FD-OCT (Fourier-domain optical coherence tomography; Optovue, Inc., Fremont, CA) imaging system in my practice for the past year. The device's ultrahigh-speed and high-resolution pictures have proved indispensible. In a number of presurgical patients with cellophane maculopathy, diabetic traction detachment, and vitreomacular traction, the FD-OCT has provided excellent data and images that were extremely useful during surgery.

IMAGING

A patient presented with advanced traction pathology from advanced cellophane maculopathy. To relieve traction in patients with cellophane maculopathy, I often prefer to use viscodelamination with a foot-controlled Healon (Advanced Medical Optics, Santa Ana, CA) injector that I designed, rather than dissection with pick, scissors, and forceps. The trick to effective viscodelamination is to slowly pressurize the membrane to uniformly and completely separate it from the retina while gently breaking its tie-down attachments (pegs). Retinal breaks and hemorrhage are minimized by choosing appropriate entry sites for the Healon injector. The FD-OCT images of this patient demonstrate the complex nature and extent of the cellophane membrane and traction (Figure 1).

DISCUSSION

I have found that membrane demarcation with triamcinolone acetonide (Kenalog, Bristol-Myers Squibb)—along with intraoperative reference to OCT pictures, which I now routinely bring to the operating room—helps me to identify the best places for pressurization and to achieve as close to 100% membrane delamination as possible. ■

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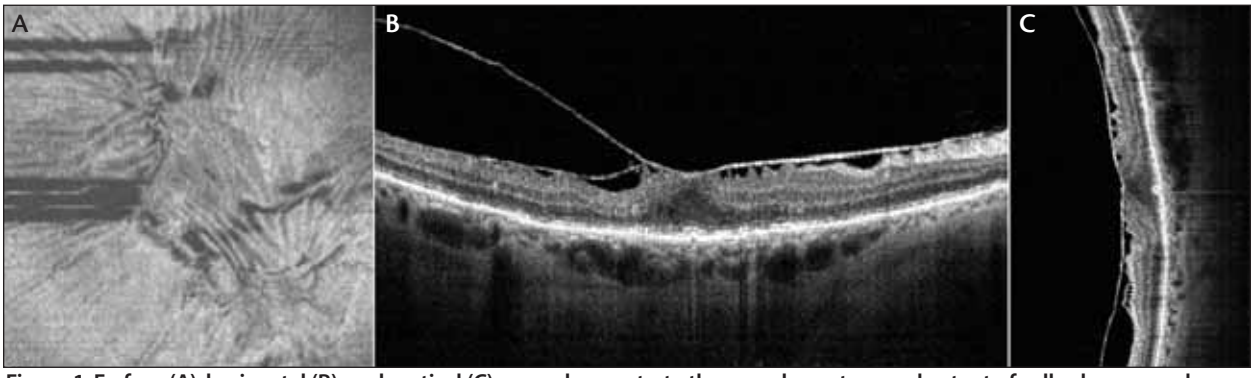

Figure 1. En face (A), horizontal (B), and vertical (C) scans demonstrate the complex nature and extent of cellophane membrane and traction.