Bi-Blade Cutter Provides Fast Speeds, Improved Fluidics

The 100% duty cycle allows constant aspiration with a consistent flow rate.

BY RAHUL K. REDDY, MD, MHS

MY FAVORITE INSTRUMENT

Over the past decade we have seen unprecedented advances in the field of surgical retina. The surgical landscape continues to expand and evolve, with emphasis placed on outcomes, efficiency, and cost. As we strive to provide the best possible care for our patients, surgeons have a variety of options with regard to surgical platforms and vitreous cutters. However, we face challenges including increasing costs of instrumentation and decreasing reimbursements.

In this economic environment, it is vital for surgeons to determine the optimal vitrectomy platform to suit their purposes. The ideal system is a platform that maximizes fluidics while exerting minimal retinal traction. With the introduction of dual cutting, modern surgical platforms have maximized the speed with which central vitreous can be removed, and we are reaching the ceiling with current pneumatic cutter designs.

I am a surgical retina specialist in Phoenix in a large academic private practice with two fellows, nine providers, and 13 locations. With a busy surgical practice operating out of ambulatory surgery centers, our vitreous cutter must be chosen to facilitate efficiency and excellent outcomes. The dual-port Bi-Blade vitreous cutter of the Stellaris Elite Vision Enhancement System (Bausch + Lomb) enables us to achieve a high degree of efficiency in the OR (Figure).

The dual-port Bi-Blade cutter is available in 23-, 25-, and 27-gauge platforms. The efficiency of the cutter is based on a double-cut mechanism, with a completely open port and 100% duty cycle. The cutter achieves speeds of 15,000 cuts per minute. Its design allows constant aspiration with a consistent flow rate, resulting in efficient vitreous removal.

Because of the importance of efficiency in central vitreous removal, perhaps the greatest advantage of the Bi-Blade cutter is the fluidic predictability that surrounds the cutter port. This predictability gives the surgeon an intuitive ease of movement within the vitreous and promotes a high level of confidence as the cutter port can shave near the surface of retina to perform a variety of maneuvers. With the superior fluidics of the system, delicate maneuvers can be accomplished with minimal retinal traction.

I have noted minimal turbulence at the tip of this cutter probe as compared with other platforms. In particular, I can more efficiently and safely perform segmentation and delamination of diabetic membranes as well as removal of peripheral vitreous on mobile retina. I particularly like to use the system's *shave* mode to address thick preretinal bands, facilitating access to dissection planes.

Figure. A close-up shot of the dual-port Bi-Blade cutter (Bausch + Lomb).

I cannot overemphasize the benefit of the predictability of this cutter probe and the surrounding flow, providing the surgeon with a high degree of control. The Bi-Blade vitreous cutter has become integral in my OR, as it enables me to maintain quality, improve efficiency, and minimize risk of complications. ■

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AT A GLANCE

- The Bi-Blade cutter on the Bausch + Lomb Stellaris achieves high cutting speeds and optimized fluidics.
- Maneuvers close to the retina can be accomplished safely and with confidence.