BLOG: Three reasons why MIGS in the suprachoroidal space has a bright future

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John A. Hovanesian, MD, FACS, focuses his blog on new technologies and innovations and how ophthalmic practices can best incorporate them to benefit patients.

The evolution of minimally invasive glaucoma surgery, or MIGS, has been exciting to watch over the past few years, and in this issue's cover story, we explore a soon-to-be available option: draining from the anterior chamber directly into the suprachoroidal space. Two such devices under review for approval by the FDA are the Transcend Medical CyPass and the Glaukos iStent Supra. Once available, these stents are likely to receive a welcome reception in the market for three reasons.

1. A broad applicability. Current MIGS procedures require an accessible trabecular meshwork and functioning aqueous collector channels in Schlemm's canal. Patients with peripheral anterior synechiae or other angle anomalies are generally not good candidates. With a suprachoroidal stent, a surgeon bypasses all the angle structures and drains the aqueous from the anterior chamber directly into the suprachoroidal space. The presence of normal angle structures is not really that relevant. Therefore, a greater number of patients with prior angle closure, uveitic glaucoma, neovascular glaucoma and other conditions would theoretically be candidates for suprachoroidal drainage, while they are not for current MIGS procedures.

2. High outflow capacity. The suprachoroidal space has an enormous surface area and remarkable absorptive capacity. With a single or even multiple stents, one can imagine a high capacity for fluid outflow with no risk of hypotony.

3. These procedures are easy! I have performed various MIGS procedures using seven different devices, approved and unapproved, from various companies, and devices that drain into the suprachoroidal spaces are the easiest to implant. With a little practice it's not even necessary to use a goniolens because the devices naturally find their way into the correct suprachoroidal tissue plane. A surgeon who is challenged by tilting the patient's head and recognizing angle structures for proper "aiming" of current MIGS devices would face none of those challenges here.

While we await final word from the FDA, anecdotal reports of results with these devices sound very promising, and I believe a very ready market awaits the approval of these exciting devices.

Disclosure: Hovanesian reports he is a consultant for Ivantis, Glaukos and Sight Sciences.