THINKING DIFFERENTLY IN GLAUCOMA

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A spate of recent data from long-term clinical trials supports the notion that interventional glaucoma procedures provide greater pressure stability and reduction in the risk for future interventions compared to medications. As well, studies are emerging demonstrating the viability of standalone MIGS, opening the potential for a whole new category of treatment for pseudophakic patients not yet eligible for cataract surgery. While drop therapy will still have a role in the future of glaucoma management, the evidence highlights that the timing for introducing surgical options is getting earlier and earlier.

So what does it mean when glaucoma surgeons say that the evolving treatment paradigm is making them think differently about how and when they intervene? An expert panel of glaucoma specialists joined a recent YoungMD Connect Workshop to share their perspectives on why the evolving treatment paradigm in glaucoma is ultimately a win-win-win scenario for all.

Why Are We Thinking Differently in Glaucoma?

Monisha M. Vora, MD: The easy answer is the boom in MIGS coupled with improving diagnostics that help us catch glaucoma earlier. But the real beneficiary of the changing paradigm is our patients. Finally, glaucoma patients are getting access to individualized, customized care that lets us do better for them.

Leon W. Herndon, MD: It's how we're treating, too. We have minimally invasive options that target the Schlemm canal, the trabecular meshwork, and direct drainage to the subconjunctival space in more advanced disease. We don't have a way to measure where the resistance is, but once we do, we will make the next jump in our capabilities.

Manjool Shah, MD: The variety of options circles back on itself, where we're starting to ask why some eyes respond to certain treatments and others don't, and as we gather data on those questions, we're starting to answer fundamental questions about glaucoma and about how MIGS works.

Lorraine M. Provencher, MD: Because we can intervene earlier in the disease and with fewer side effects, we are able to think more about quality of life as we discuss options with the patient. That's always been the hope with glaucoma innovation, and now we're there.

THINKING ABOUT THE ANATOMY: IS PRESSURE LOWERING STILL THE MAIN OBJECTIVE?

Manjool Shah, MD

"Pressure is still something we think about, but now we have so many other endpoints to think about, as well."

- The expanding options for treating glaucoma allow us an opportunity to consider the pressure as more than a number—we can think about the quality of pressure control.
  - Pressure fluctuation independent is a risk factor for disease progression.
  - Medical therapy presents challenges to maintaining sustainable and high quality pressure, likely due to adherence concerns, even with monotherapy.
  - Data from landmark trials such as EAGLE, LiGHT, and HORIZON show lower rates of progression with interventional options compared to medications alone despite marginal pressure differences, suggesting the importance of stability and moving away from a dependence on topical medications.
    - There is hope that improving physiologic outflow early in the disease course may maintain distal outflow pathways and have disease modifying effects.
- Is there evidence that some drug classes are associated with less diurnal fluctuation?
  - Yes: Carbonic anhydrase inhibitors, prostaglandins; no: beta-blockers and alpha-agonists; not enough information: ROCK inhibitors, nitric-oxide donors.

WHERE DO PHARMACEUTICALS FIT IN?

Leon W. Herndon, MD

"The role of medications is diminishing, and there are cases where laser first, or even surgery first, is the best option. But some of the delivery systems out there may cause us to think about the role of medical therapy."

- Medications are great when patients are taking them. The wide assortment of issues that affect patients' ability to access medications, remember to take them, and use them properly are why we've been so focused as a field on finding new ways to deliver them.
  - The data is clear: When patients miss doses, the greater the risk for vision loss.
  - Sustained-release therapies give us a chance to do better for our patients, even if we are buying time for when surgery might be warranted.
- Drug delivery systems to be aware of: DURYSTA (AbbVie/Allergan) available now, but only approved for one-time dosing; iDose (Glaukos) in late-stage development.

THINKING ABOUT TREATING OVER A LIFETIME AND CONSIDERING QUALITY OF LIFE

Lorraine M. Provencher, MD

"Glaucoma treatment is a marathon, not a sprint. You have to pace out what you are doing, and you have to think two steps ahead."

- Quality of life is an important endpoint of glaucoma management, and it goes hand-in-hand with thinking about treating the patient over a lifetime.
- The minimally invasive options available provide a chance to reset the anatomy. This directly affects quality of life if it reduces medication burden (which is likely) and indirectly impacts quality of life if it reduces the risk of future, more invasive interventions (which we have evidence to support).
- The age of the patient plays heavily into every decision I make in the clinic.
  - For younger patients, I want to minimize the impact on the conjunctiva so that I can have future options available. For very elderly patients, a conjunctiva-based, bleb-forming surgery may be high risk, so I will often choose a treatment that is less invasive and less burdensome to the patient.

THINKING DIFFERENTLY ABOUT PATIENT SELECTION

Monisha M. Vora, MD

"Be involved in educating your referral network. When there is knowledge in the community, it will filter to patients (and referral sources)."

- There are so many devices out there and probably hundreds of flow charts about how people have thought to organize all the available options.
  - For mild to moderate, drops or laser would probably come first. I am looking out for signs of compliance issues and monitoring for ocular toxicity.
  - You want to make things easy on your patients: the more drops you add, the more the compliance decreases. Look for opportunities to start the conversation about MIGS to take the compliance issue out of the equation.
- Recent data demonstrating the viability of canaloplasty with OMNI (Sight Sciences) as a standalone procedure is a welcome sign.
  - The category of patients eligible for standalone MIGS (or for whom the option is suitable) is wider than we first think.
  - The viability of standalone MIGS procedures will likely mean more patients with mild-to-moderate glaucoma will get treated surgically by comprehensive ophthalmologists and cataract surgeons.