

Parag A. Majmudar, MD

Dr. Majmudar describes how his early experience with refractive surgery and the haze-preventing properties of MMC sparked his interest in performing surface ablation.

Did you want to be an ophthalmologist when you started medical school?

I originally wanted to be an orthopedic surgeon. I have always been a sports fanatic, and, while I was growing up in New Jersey, my dream was to be the team surgeon for the New York Giants. While I was a first-year medical student in Philadelphia, I was selected to participate in orthopedic research and clinical activities at Massachusetts General Hospital in Boston. At the end of the year, however, I was not sold on the subspecialty.

During my second year in medical school, I was a research fellow for Verinder Nirankari, MD, a clinical professor at the University of Maryland in Baltimore. He was investigating the outcomes of epikeratophakia for aphakia, and my involvement in the project got me hooked on refractive surgery, long before surgeons began using the term. The rest, as they say, is history.

How did you become interested in performing surface ablation?

I remember hearing a lecture about PRK in 1994 when I was a resident at the University of Chicago. The next year, one of my mentors, Ken Goins, MD, began performing surgery with the Summit Apex excimer laser. For a while after that, LASIK was all the rage, partly because the procedure did not seem to cause the type of corneal haze that so many surgeons were seeing after PRK. In 1997, my fellowship mentor and partner Randy Epstein, MD, and I developed the initial protocol for using topical mitomycin C (MMC) to prevent corneal haze after surface ablation. Over the past few years, we have seen a resurgence of PRK techniques, and I like to think that MMC has played a small role in making PRK as successful as it is today.

Do you think surgeons will be using MMC differently 5 years from now?

I certainly hope so. Although several investigators have scientifically studied the role of MMC in refractive surgery,¹⁻³ we are still unaware of the drug's optimal dosage and duration of application. In the 11 years we have been using MMC to prevent corneal haze after surface ablation, it has rarely caused vision-threatening complications, but we need more research to verify the agent's safety.



In the future, I envision surgeons using a thin wafer, perhaps a nanotechnologic device, that is impregnated with the exact amount of MMC required to retard the formation of haze. At the conclusion of the procedure, surgeons will place the wafer on the cornea. As it dissolves over the next few seconds, it will deliver a precise dose of MMC to the desired part of the cornea without affecting contiguous structures on the ocular surface.

How has the frequency and quality of refractive complications changed since you started practicing?

Refractive surgery has changed significantly during the past 10 years. As surgeons embraced LASIK, they encountered but-tonholes, diffuse lamellar keratitis, and, now, ectasia. Subsequent improvements in microkeratomes and the introduction of femtosecond technology have reduced the incidence of these complications.

In general, we surgeons are encountering fewer intra- and postoperative complications as we become more aware of strategies for their prevention. As our understanding of refractive surgery and its limitations continues to evolve, I hope that we will see a lower incidence of sight-threatening complications and that we will only have to deal with more manageable challenges.

How does it feel to be part of the team that won the 2008 ASCRS Challenge Cup? Have you always been a singer?

The Challenge Cup was a fantastic experience, mostly because I enjoyed working with my fellow team members of "The Young and the Restless." It is a great event that helps all of us to unwind after a busy meeting—and perhaps to learn something new in the process.

From a very young age, I was inspired to sing by my father, who is a talented amateur singer. I was the lead vocalist for a short-lived band while I was in college, but I now primarily sing for my own enjoyment. I often sing at parties and local events with a small group of friends—although, these days, it is mostly songs from Bollywood movies! ■

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