Remembering George O. Waring, III

J. Bradley Randleman, MD

On January 27, 2015, a mentor, colleague, and friend passed away. George O. Waring III, MD, left an amazing ophthalmic legacy, left a multitude of friends and colleagues from every continent and station in life, and left us all far too soon.

I had the honor of training under George at Emory University for my fellowship in cornea, external disease, and refractive surgery. I hoped to emulate his academic career, and remember exactly where I was standing when George asked me to become an Associate Editor for the Journal of Refractive Surgery in 2008. I am writing this today because of the support he provided me in taking the position of editor-in-chief, a position he defined for 21 years.

George’s impact on our profession was incredible, and his impact on the journal immeasurable. George transformed, refined, and defined the journal during his 21-year tenure. I cannot do justice to either the breadth or depth of George’s career, let alone his personal influence on so many, in this editorial, but will highlight some of his influence on our profession over so many years.

**Education, Contributions, and Awards**

George was born in Buffalo, New York, and received his medical degree from Baylor Medical College in Houston, Texas, followed by an ophthalmology residency and a Heed Fellowship in corneal disease and surgery at the Wills Eye Hospital in Philadelphia. George’s mentor was Peter Laibson, MD, who had recently returned to Wills Eye Hospital following his corneal fellowship at Massachusetts Eye and Ear Infirmary with Claes Dohlman, MD, PhD, and his co-fellow was Jay Krachmer, MD. One can only imagine how electrifying and inspiring that atmosphere must have been! George’s initial major contributions to the literature originated at Wills Eye Hospital, with comprehensive histopathologic analyses of anterior chamber cleavage syndromes and congenital corneal dystrophies.

George’s first academic appointment came in 1974 as Assistant Professor of Ophthalmology at the University of California–Davis, where he established the first eye bank in northern California. In 1979 he joined the faculty at Emory University, where he was a tenured Professor of Ophthalmology and Director of Refractive Surgery until 2004.

George published more than 250 peer-reviewed original articles, 60 book chapters, and 250 brief communications. He received many significant awards, including the American Academy of Ophthalmology Lifetime Achievement Honor Award, the Society of Heed Fellows Outstanding Ophthalmologist Award, the Castroviejo Medal from the Corneal Society, and the Lans, Barraquer, Kritzinger, and Lifetime Achievement Awards from the International Society of Refractive Surgery.

George also published two textbooks: *Corneal Disorders: Diagnosis and Management* (with Howard Leibowitz, MD) in 1998, and his authoritative work *Refractive Keratotomy for Myopia and Astigmatism* in 1991. Legends abound at Emory University about George’s work process during the creation of that book—with long stays in the office, coming out only to eat and reenergize for the next chapter. Refractive surgery was George’s passion, and bringing scientific analysis to this practice his mission.

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PERK Study

The PERK study (Prospective Evaluation of Radial Keratotomy) was the first formal clinical study of refractive surgery, and George coordinated this multi-center effort, obtained funding from the National Institutes of Health, and served as the study director. It garnered attention not only in medical circles, but also in the media. George made appearances on television shows including “Today,” “Nightline” and “The McNeil Lehrer NewsHour.”

The PERK study also drew litigious interest. A lawsuit was filed against George, participants in the PERK study, and other ophthalmologists by surgeons claiming the study engaged in antitrust activity by restricting the trade of physicians who wanted to perform radial keratotomy. George and his PERK study colleagues held that radial keratotomy outside the study should be done cautiously until reliable scientific evidence was documented. In reflecting on this judgment, George said, “After months of deliberating, we won the jury trials and the appeals, and it set a case law which stated that scientific studies of medical procedures cannot be portrayed as a limiting, antitrust activity, because they are trying to generate reliable information.” George felt his leadership role in the PERK study was a landmark in his life. It generated invaluable short- and long-term data on the radial keratotomy procedure, including its benefits and shortcomings, and his devotion and diligence preserved the integrity of that study so that all could benefit from its findings.

LASIK

By the time the long-term results of radial keratotomy were being collected and published, the excimer laser had made its way into the refractive spotlight, and George was ultimately instrumental in bringing LASIK to the United States.

George received a grant from the National Eye Institute to study the use of the excimer laser in monkeys. He performed this research at the Yerkes Regional Primate Research Center in Atlanta. Following this early animal research, he worked as a principal investigator in clinical trials of photorefractive keratectomy with the Summit Technology excimer laser in human eyes. The data that he and others collected were presented before the U.S. Food and Drug Administration, and the device was approved in 1992. “This was the first approval for the clinical use of the excimer laser by the FDA. It was a proud moment for me,” George said.

George was passionate about refractive surgery, and driven to understand, improve, and adopt the latest technological advances. When he determined that he would need to leave the United States to obtain the necessary exposure to LASIK, he did so. He said, “During this time, it became clear to me that if I was going to be an expert in refractive surgery, I would have to get my LASIK learning abroad, because the FDA constraints were preventing me from progressing further.” From 1993 to 1995, George served as Chairman of the Department of Ophthalmology and Director of Research at the Al-Magrabi Eye Hospital in Jeddah, Saudi Arabia, during a leave of absence from Emory University, during which time he helped refine the LASIK procedure.

In 1995, George brought these concepts back to Emory University, and along with his clinic partners R. Doyle Stulting, MD, PhD, and Keith P. Thompson, MD, set out to define many of the fundamental aspects of LASIK practice that we still employ today. These include seminal work on LASIK safety and complications, the safety of bilateral simultaneous LASIK surgery, and helping to establish expected topographic findings after excimer laser surgery.

Journal of Refractive Surgery

Although not the first editor-in-chief for the Journal of Refract Surgery (that honor goes to Jim Salz), George was certainly the editor-in-chief most associated with the journal. I grew up in ophthalmology knowing the journal by its colloquial name “George’s Journal.” George served as editor-in-chief from 1989 until 2010. Simply put, George defined the current format of the journal. George took it from a forum for discussion where most submitted work was ultimately published to a well-respected monthly offering with an excellent journal ranking and impressive impact factor.

George remained throughout his career a staunch advocate for the author, always working to improve manuscripts that might be roughly written but that contained science worth distributing, until the sheer volume and quality of submitted work precluded this approach. George’s stated philosophy was simple: “to assist, strengthen, advise, and expedite authors’ contributions and be the author’s ally.” He certainly succeeded in that goal. George sought to bring standardization to the practice and reporting of refractive surgery techniques and outcomes through the standard reporting for refractive surgery outcomes, a process that has been refined, updated, expanded, and continued throughout the years.

George also facilitated the expansion of the journal to monthly publication and online advanced release publication.

George oversaw the creation of two awards the journal gives out annually: the Troutman award, begun in 1992 and given to an outstanding author and International Society of Refractive Surgery member; and a namesake award, the
Waring medal, which is open, at George’s insistence, to all authors regardless of age, professional degree, or academic/institutional affiliation.30 This year will mark the tenth recipient of the Waring medal—George would have been proud of that! Sadly and ironically, George’s last contribution to the journal was a guest editorial in honor of another great refractive surgeon we lost too early, Joseph Colin.31

**HIS IMPACT ON OUR PROFESSION**

George believed in the power of refractive surgery to change people’s lives. Anyone fortunate enough to witness George’s delivery of his “Refractive Surgery over a Lifetime” lecture witnessed the confluence of his eloquence, mastery of refractive surgical techniques, passion for the surgical correction of ametropia, and his never-ending quest for perfection.32 His accomplishments were many, but what cannot be found in a curriculum vita is the mentorship and friendship that George provided to so many of us for so many years. For me, George was a clinical mentor and an academic mentor. He provided guidance about the manuscript writing process and the editorial process. He also helped formulate my teaching and lecture style by example and offered constructive feedback over the years.

George was the consummate learner, always searching for new and better ways to do things. He remained active in resident and fellow didactic education until his death; just a week before his stroke, George was in attendance at our weekly cornea conference, as energetic and invested as ever in learning something new and passing along words of wisdom to the young ophthalmologists in training.

I still have occasion to see patients George cared for during his tenure at Emory University. Just this week I told one of his long-time patients of his passing. The patient, who had not seen George in 10 years, immediately became tearful and said, “He was my savior!” Her husband added, “When you saw Dr. Waring, you always knew you were in the right place.” I cannot add anything more to that.

George, you will be missed.

**REFERENCES**


