

# A Look Behind the Mask

An eye surgeon combines an account of his own professional experiences with stories of his heroes in the field.

By John Shea



Photo by Todd Lajoie

For a practicing eye surgeon and assistant professor of ophthalmology at Tufts University School of Medicine, Andrew Lam, M.D. '02, knows a thing or two about writing a tense, vivid scene. Indeed, he appears to have learned well from the masters of suspense. Even when presenting the more historical sections of *Saving*

*Sight: An Eye Surgeon's Look at Life Behind the Mask and the Heroes Who Changed the Way We See* (2013), Lam paces his narratives well. It is no surprise that he went on to publish a novel in December, set in China during World War Two. For *Saving Sight*, he decided that the best way to draw readers in was to intersperse his sketches

of some innovators and inventors in the field of ophthalmology with his own experiences as a surgeon.

And for Lam, the experiences range from the routine – as routine as delicate surgery can ever be – to the more technically and emotionally demanding. The book covers eye trauma, cataracts, LASIK, retinal detachments, macular degeneration, and more. In the first chapter, here's how he describes an emergency operation he had to handle as a retina fellow at Wills Eye Hospital. Jacob, the young worker he is treating, had been grinding metal without safety glasses:

I gently opened his lids and looked through the scope.

*Oh no.*

At first I thought the cornea was missing. All I saw was a black blob mixed with some dark brown iris tissue. Had the contents of the eye been expelled? I'd never seen that before, but I knew it could happen if the patient coughed violently or vomited while his eye was ruptured like this.

I drew a deep breath and looked closer. *Wait.* Now I could make out the torn edges of a huge laceration, starting in the center of the cornea and extending laterally, beyond the edge of the cornea and into the sclera. How far back did it go? I couldn't tell; it was a bloody mess. The normally white sclera and the conjunctiva of the eye were torn, swollen and beefy red. . . .

*The metal.*

It looked huge in my view through the operating microscope, jagged, at least five millimeters across. It was lying on a bed of bruised retina, looking like a meteor that had just cratered the moon.

*How the hell am I going to get this out?*

It was too big for forceps. No intraocular forceps would have jaws that opened wide enough. There was a special basket-like instrument for scooping BBs out of

the eye, but this shard was too oddly shaped to use that. . . . There was only one way: to take it out the way it had gone in, through the gaping wound in the front of the eye.

“Get the magnet,” I told my assistant.

### Advances in the Field

Here and in other places in the book, Lam effectively describes the professional tools and the parts of the eye that most of us never think of. I read those pages with keen interest and, I admit, a certain amount of queasiness – and I suspect other readers may feel the same way. To some extent, Lam expects that kind of ambivalent response. As he puts it in *Saving Sight*: “The eye freaks a lot of people out. Come at the eye with something as simple as an eye dropper and some patients lurch back or, worse, faint. Medical students are often no better. Most of my classmates wouldn’t have dreamed of going into ophthalmology.”

But readers who proceed will find interesting accounts of some “heroes” of ophthalmology. Among them is Sir Harold Ridley, a British doctor whose serendipitous encounter with a pilot of the Royal Air Force during the Battle of Britain led to his invention of the artificial intraocular lens. Another is Charles

Kelman, an American ophthalmologist whose trip to the dentist gave him an idea for radically improving how cataracts are removed: through phacoemulsification, which emits ultrasonic energy to emulsify the cataract and allow it to be removed through a small incision, involving less recovery time.

The story of Charles Schepens almost seems

the work of a novelist. A Belgian ophthalmologist who was forced to flee to occupied France during World War II, Schepens for a while managed a lumber mill there under an assumed name, pretended to be friendly with the Gestapo – and helped refugees escape across the border. He invented the binocular indirect ophthalmoscope, which, as Lam points out, “revolutionized our ability to diagnose and treat diseases located inside the eye.” For Lam, viewing the retina through the instrument for the first time was a moving experience: “I gasped. It was incredibly beautiful.”

### The Limits of the Profession

Although Lam the surgeon managed to save Jacob’s eye in the first chapter, Lam as writer acknowledges limitations. Jacob regained “vision good enough to count fingers at one foot. No one would claim that this level of vision was very good. If I was making this story up, I might say that he had a miraculous recovery:

20/20 vision, after a corneal transplant and an artificial lens.” In addition, Lam also recounts a touching experience in his last chapter, when he determines that Ann, a shy 18-year-old Asian American, has a detached retina in her left eye. One of the steps he has to take is to flatten the retina – which is, he points



out, “delicate neural tissue packed with sight-giving photoreceptors. It’s only 250 microns thick, just one-fourth of one millimeter. Any manipulation of it is certain to cause some damage.”

For a while, the left retina improves, and Lam also corrects the right one. But a month after that, the left retina begins

to detach again. Finally, while inspecting Ann’s retina again during a subsequent operation, Lam decides not to proceed. “Some areas were barely recognizable as retina at all – distorted by traction or charred from previous laser treatment.” It was, he says, “the first time I’d been unable to fix a retinal detachment.”

### Some History of the Personal Sort

Born in Philadelphia, Lam is also part of a Penn tradition. His father, Wilfred Lam, graduated in 1973; his uncle, Victor Lam, in 1971. Two other uncles, Thomas J. Braciale Jr. and Isaac T. Tam, an internist at Penn Primary Care in West Chester, graduated in 1975. In addition, a cousin graduated last year.

Lam did his undergraduate work at Yale University, where he graduated *summa cum laude*. His degree in history no doubt helped him in writing his new novel, *Two Sons of China*. It focuses on an American lieutenant and a Communist Chinese guerilla leader who become great friends, united – at least for a time – in the fight against the Japanese.

Lam’s second career has started well. *Saving Sight* has sold well on Amazon, and it recently received Honorable Mention Awards in the biography/autobiography category of two competitions, the New England Book Festival and the London Book Festival. ■



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