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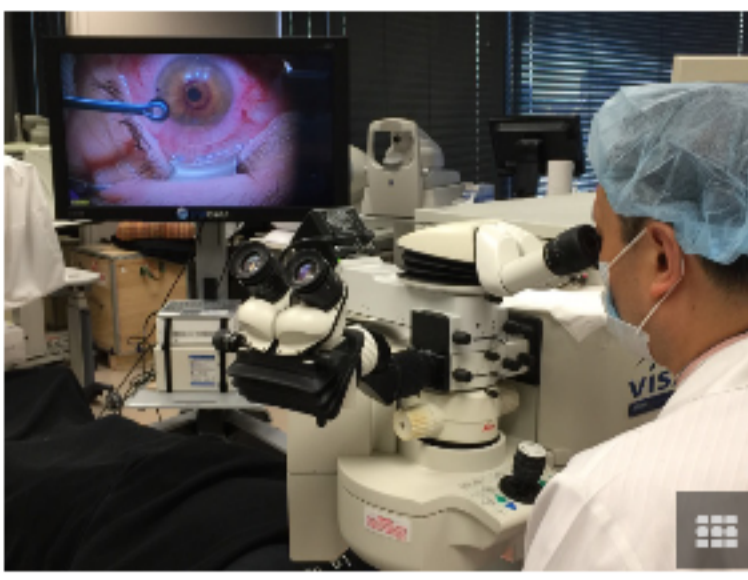
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Wang Debuts 3D Laser KAMRA in Tennessee

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Can't find any of your 10 pairs of reading glasses? A newly approved laser surgery option might just have you throwing them all out.

Last month, **Ming Wang, MD, PhD**, performed the state's first 3D Laser KAMRA procedure to improve near vision

in certain patients with presbyopia.

The KAMRA inlay by AcuFocus, which received approval from the U.S. Food & Drug Administration in April, is the first implantable device for correction of near vision in patients who have not had cataract surgery and don't need corrective lenses for distance vision.

Wang said about 25 percent of the population is nearsighted, 25 percent farsighted, and the remaining 50 percent don't typically need glasses ... until they hit their 40s and begin to experience presbyopia, a loss of the ability to change the focusing power of the eye that occurs naturally with age.

"As they get to age 40-45, they need reading glasses," Wang noted. "To them, it's a dramatic change of quality of life," he said of those who haven't previously dealt with eye problems. He added that up until now, there hasn't been an effective surgical solution to treat presbyopia other than invasive lens surgery.

For many, the KAMRA inlay might offer a new answer. The ring-shaped, opaque device, which is implanted in the cornea of one eye, blocks peripheral light rays while allowing central light rays to pass through a small opening in the center of the device to focus near vision. While the ability to see small print is improved in the eye that has the implant, the distance vision of the two eyes working together isn't affected so patients get the best of both worlds.

"When we implant a pinhole device, such as the 3D Laser KAMRA, it focuses entrance light into a narrow beam, which greatly increases the depth of focus or range of vision for our patients," Wang said. "When you focus ... when you shrink the aperture ... every cameraman knows when you do that, you increase the depth of field," explained Wang. "You can actually see further *and* see closer." It's the same concept for the KAMRA inlay, he added.

Before approving the KAMRA inlay, the FDA reviewed results of three clinical studies. At one year after implantation, 83.5 percent of patients in the main study achieved uncorrected near visual acuity of 20/40 or better.

In addition to not being intended for use in patients who have had cataract surgery, other exclusion criteria include severe dry eye, an active eye infection or inflammation, insufficient corneal thickness, active autoimmune or connective tissue disease, and uncontrolled glaucoma or diabetes, among others.

Expanded Use

Currently, the KAMRA labeling warns the safety and effectiveness in patients who have had LASIK or other refractive procedures are unknown. While the 11 procedures Wang performed on June 9 met the original FDA criteria, he believes with physician discretion and additional research, the use could be expanded.

LASIK, he noted, isn't usually a preferred option for patients after age 40-45. While the original problem might be corrected, patients of that age almost immediately begin to need reading glasses. "LASIK is to correct three of the four ocular conditions – myopia, hyperopia, and astigmatism," he said, adding it has been an ongoing challenge to address presbyopia. "As a result, our baby boomer patients have been left on the sidelines of modern laser vision correction treatment."

Wang said a monovision approach – where one eye is for distance and the other for near vision – is sometimes tried. "The problem with that is I'm intentionally moving the focal point of the non-dominant eye closer. You can read better, alright, but that eye will be blurry for distance," he explained. Wang added the symmetry of both eyes is important for depth perception. "It works for some people, but it doesn't work for others ... they don't like the asymmetry," he added of monovision.

That, he continued, is potentially the beauty of being able to insert the KAMRA inlay in patients who have previously had LASIK. "You're not introducing asymmetry between the two eyes. I simply add on top of what you have ... I'm not taking anything away," he said.

Wang concluded, "We've been looking for a solution to add to our capabilities. That's the dream ... how can you add reading capability in an eye with a lens that's inflexible?"

Potentially, 3D Laser KAMRA could offer that solution to expand near vision beyond the current FDA approval for the millions who only need reading glasses to an even larger group of patients who have one of the three other ocular conditions plus presbyopia.

"We are excited to be the first again," Wang said of debuting the new laser surgery option. "The focus of 21st century medicine now is to improve our sight even as we age to enable our patients to see better and longer. It improves the quality of life for our patients."

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