

Literature Review of LASIK Shows Benefits, Challenges

Toni Baker - 2004 August 18

Most of the million-plus people having LASIK each year to correct their vision are happy with the results, according to a 15-year literature review that indicates most reasons for discontent could be resolved with more patient education before surgery.

“Basically this confirms our own clinical experience: patients are happy, patients turn out well,” said Dr. Balamurali Ambati, ophthalmologist and corneal specialist at the Medical College of Georgia.

Dr. Ambati was asked to review clinical trials of LASIK for the August issue of *Current Opinions in Ophthalmology* and report on findings regarding outcomes and quality of vision.

He found that 94 percent of patients participating in major trials across the country have at least 20/20 vision following the surgery that reshapes the cornea, the front part of the eye that works with the lens to focus light onto the retina. Also, 98 percent of patients in major trials had 20/25 vision or better, which means they can read one less line on the eye chart, and nearly all patients would recommend the procedure to a friend. In the MCG practice, those figures are even better, and the vast majority of patients are 20/15, which is better than 20/20, Dr. Ambati says.

Discontent with LASIK can result from problems with night vision, including night glare, such as halos around lights. About 25 percent of patients have some night vision disturbances in the first few weeks after surgery and about 18 percent feel their night driving is impaired in initial few weeks after surgery.

The good news is night-vision problems typically resolve within a few months – patient complaints went down from 25.6 percent to 4.7 percent from month one to month 12 – but the cause remains unclear, Dr. Ambati says. It may be that pupils dilate at night to let in more light beyond the corrected area of the cornea. Newer lasers, such as the one in use at MCG Medical Center, enables surgeons to enlarge the treatment zone “to an area larger than most folks’ nighttime pupil,” Dr. Ambati says. He and his co-authors Dr. Stephen Hammond, ophthalmology resident, and fourth-year medical student Anil Puri, say one of the best ways to avoid unhappiness with this transient problem is to ensure upfront that patients are aware of it.

Preoperative education also is vital for patients over age 40. LASIK helps reshape the cornea, not the lens which is the primary culprit in age-related far-sightedness. As with other muscles, with age it is thought the muscles that help the lens reshape to change focus from far to near get weaker. Although LASIK can successfully reshape the cornea to help compensate for this loss, the procedure cannot be used to correct both far- and near-sightedness in those over age 40. The literature review showed that meant the happiest patients tend to be age 45 or younger. “Some patients chose to have one eye corrected for distance and the other for near,” says Dr. Ambati in an effort to avoid needing reading glasses after surgery.

Explaining up front the limits of the procedure may help avoid dissatisfaction later, he says. The authors write “... patients over 45 must be treated with caution and only after being counseled on their continued need for reading glasses.” For those considering correcting one eye for distance and the other for close vision, he suggests patients first wear contacts that work that way as well to see how they like it.

The researchers also reported transient problems with contrast sensitivity. A black and white eye chart may not indicate a problem but, “real life is a lot more,” Dr. Ambati says. “Contrast is a big part of our lives in terms of being able to judge edges, fine discrimination between shades.” Some studies found diminished contrast sensitivity after surgery. But it generally recovers to preoperative levels within six months.

Dr. Ambati hopes that better education along with evolving techniques and technology will continue to improve patient satisfaction with LASIK, writing “... success is more than 20/20; overall quality of vision and patient satisfaction are essential.”

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