While a proportion of patients undergoing LASIK monovision procedures may require surgical enhancement, the overall satisfaction rate remains very high, making this approach an “attractive” option for presbyopic patients who wish to be free of glasses and contacts, according to Mark J Mannis MD. In an interview with EuroTimes, he emphasised that “the clinician needs to assess very carefully the visual needs of the potential monovision patient and to take the time to do a thorough assessment before committing to this course.”

He also said that he and his co-investigators “strongly recommend” a trial of monovision using contact lenses before surgery. Dr Mannis is professor and chair of the Department of Ophthalmology & Vision Science at the University of California, Davis.

The study, which Dr Mannis presented during refractive surgery specialty day at the annual AAO meeting, included 174 eyes in 87 patients. All patients were older than 40 years of age and underwent surgical monovision between January 2000 and January 2003. Refractive errors included spherical myopia, myopia with astigmatism, hyperopia, hyperopia with astigmatism, and mixed astigmatism. Eighty-two patients had the dominant eye corrected for distance and the non-dominant eye corrected for near vision, while five patients had the reverse.

After the initial procedure, 31 eyes underwent LASIK enhancement and two patients underwent reversal of monovision. A total of 28 per cent of the patients required surgical enhancement.

Surgeons can expect a high enhancement rate because even small amounts of astigmatism may require correction,” Dr Mannis said.

Despite the high enhancement rate, most patients, 97.7 per cent, said that they were satisfied with the results. Ultimately, the average spherical error improved from -3.69 D to 0.02 for the distance eye and from -3.86 D to -1.27 for the near eye.

Dr Mannis pointed out that 35 of the 87 patients had a contact lens trial before undergoing monovision and that none of these patients underwent reversal of monovision. Although this difference was not large enough to be statistically significant, he stressed the importance of a contact lens trial prior to surgery.

He also recommended careful screening to ensure that patients understand the rationale behind monovision and that they will need to wear glasses that bring the uncorrected eye up to distance vision for driving at night. Patients should also expect that it will take at least three weeks to get used to surgical monovision.

He cautioned that the procedure is not for people whose work is dependent on binocular vision, such as pilots or professional drivers. Alternative options are glasses, bifocal contact lenses, conductive keratoplasty, accommodating IOLs, and monovision with contact lenses.

“Surgical monovision does have drawbacks. The procedure can lead to reduced stereocuity, reduced contrast sensitivity, induced esophoric shifts, and visual disturbance scotopic conditions. That’s why chair time and counselling are needed to ensure that patients understand the advantages and disadvantages of monovision.”

Jorge L Alió MD, one of the moderators at refractive surgery specialty day, told EuroTimes that although LASIK monovision has the advantage of being easily reversible, it also has several disadvantages.

“Monovision is not an optimal alternative,” said Dr Alió, who is professor and chair of ophthalmology at Universidad Miguel Hernandez, Alicante, Spain. For example, monovision is not a good choice for patients who are farsighted in both eyes and are demanding near vision performance improvement.

“This would be a better alternative if demonstrated as feasible in terms of patient satisfaction equivalent to monovision,” he said.

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