Multi-distance visual performance and clinical outcome of a new monofocal intraocular lens using extended depth of focus.

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Abstract

AIM

To evaluate the visual performance and clinical outcomes after implantation of a new refractive aspheric monofocal intraocular lens (IOL) using extended depth of focus to extend the range of vision.

METHODS

This is a retrospective, consecutive case series of cataract patients who underwent bilateral implantation of the Lucidis EDOF 108M/124M (Swiss Advanced Vision, SAV-IOL SA, Neuchâtel, Switzerland) monofocal IOL. Patients followed up for 3 months were included in the study. Data on distance and near visual acuity, refractive error, high-order aberrometries (point spread function, root-mean-square, alpha and kappa angle), adverse events, subjective symptoms, spectacle independence and patient satisfaction were collected and analysed.

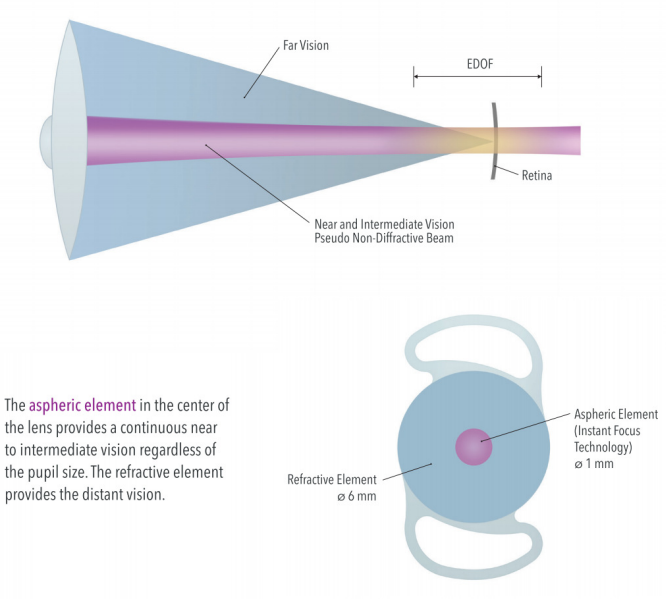
RESULTS

Sixteen eyes of 10 patients with a mean age of 73.1±11.3 years (51-89) were included in the study. Mean uncorrected distance and near visual acuity remained stable through the postoperative visits, and were 7.1/10 (±2.59) and 7.5 (±0.83) respectively on the Snellen chart at 3 month post-operatively. At the end of follow-up period, the mean spherical equivalent was -0.24±0.42 diopters and 100% of the eyes were within 1.00 D of the target refraction. There were no reported adverse event related to the surgery or the lens itself. None of the patients reported subjective symptoms of halo or glare. Spectacle independence rate was 80%. All of the patients reported some degree of improvement to their quality of life, ranging from mild to significant.

CONCLUSION

The Lucidis EDOF IOL was safely implanted and successfully restored distance and near visual acuity without causing any significant high-order visual aberrations. Its extended depth of focus technology allows this monofocal IOL to achieve high levels of spectacle independence.

Image



Recent Publications

1. Mansouri K, Mermoud A (2018) Diurnal Variations of Peripapillary and Macular Vessel Density in Glaucomatous Eyes Using Ocular Coherence Tomography Angiography. J. Glaucoma 10.1097.
2. Mansouri K, Mermoud A (2018) Prospective Evaluation of Standalone XEN Gel Implant and Combined Phacoemulsification-XEN Gel Implant Surgery: 1-Year Results. J. Glaucoma 140-147.
3. Chaudhary A, Mermoud A (2018) XEN Gel Implant: a new surgical approach in glaucoma. Expert Rev Med Devices 47-59.
4. Mermoud A (2017) Deep Sclerectomy. Dev Ophthalmol. 59:36-42.
5. D'Alessandro E, Mermoud A (2017) XEN-augmented Baerveldt: A New Surgical Technique for Refractory Glaucoma. J. Glaucoma 26(2):e90-e92.



Biography



Pr Mermoud - With over 145 publications on the topic, Professor Mermoud is one of the world-leading experts in the field of glaucoma. He has recently made the headlines after he developped breakthrough medical devices to optimize the control of intraocular pressure in the state-of-art clinic of Montchoisi. His dedication to treating glaucoma was rewarded last year, when he received the medal of honor of the International Congress on Glaucoma Surgery, naming him the world's best glaucoma surgeon.

Dr Gillmann - After a career as an architect in some of the most prestigious agencies in Europe, Dr Gillmann trained as an ophthalmologist across Great-Britain and Switzerland. He is now a research fellow to Pr Mermoud and Pr Assoc. Mansouri at the Centre du Glaucome in Montchoisi, where he contributes to the Centre's forefront projects in glaucoma diagnosis and treatment.

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