

Multifocal Phakic IOL an Alternative Approach?

Early results with the ArtiPlus IOL report promise for presbyopia treatment.

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Interim results from an ongoing international multicentre trial indicate that the ArtiPlus phakic multifocal IOL (Ophtec) offers good efficacy and safety as well as high rates of spectacle independence for the correction of presbyopia in the myopic population, according to Dr José L Güell.

"The results are promising and, if confirmed with larger cohorts and longer follow-up, should give us a viable alternative to existing strategies for presbyopia in myopes with the advantages of reversibility and anatomical preservation," he said.

The surgical approaches currently available all have some limitations, he pointed out.

The subjective feedback so far from patients to surgeons is very positive.

"There are two main approaches: those touching the cornea with the laser trying to achieve some degree of multifocality or monovision and those doing crystalline lens surgery using different kinds of IOLs," Dr Güell explained. "Most, if not all, of these procedures consist of irreversible surgical procedures. If we perform corneal laser surgery in this age group of presbyopic myopes, it may induce some limitations in the future selection of the ideal IOL at the time of cataract surgery."

Published data has also demonstrated crystalline lens surgery in presbyopic myopes, though effective, is associated with a higher risk of retinal detachment and a complete loss of the residual accommodation.

"For these reasons, phakic IOLs are an alternative option," he said. "The Artisan, Artiflex, and implantable collamer lens (ICL, Staar Surgical) have all demonstrated very good efficacy, predictability, and safety ratios in properly selected young myopes. And they have the attractive feature of reversibility."

Dr Güell identified three main types of patient profiles adapted for presbyopic correction with phakic implants.

The first type is patients who had phakic IOL implantation in the past and have some residual myopia. If they have reached presbyopic age, they might use glasses only for night driving or specific tasks.

"If the biometric, IOP, and endothelial cell count parameters are okay, they are usually quite comfortable keeping the phakic IOL in place and using correction only in particular circumstances, such as night driving," he said.



The second group is primary spherical or toric phakic IOL implantation in presbyopic myopes targeting some degree of monovision.

"This is a relatively standard approach in my practice and works well," he said.

The third group is primary phakic IOL implantation with the ArtiPlus iris-claw phakic lens that incorporates the multifocal optic technology of the Precizon IOL into the Artiflex platform.

"The Artiflex platform has proven safety and efficacy for more than 20 years, so we are familiar with the optic behaviour," he said. "The Precizon multifocal optic has also proven its efficiency during the last 10 years."

A prospective single-arm multicentre study of the ArtiPlus is currently in eight centres in three countries. Dr Güell presented his interim data of 30 patients with a mean age of 51 years. Complications provided by the clinical trial interim analysis showed a very good safety profile, apart from one case of optic neuritis, which was not classified as device-related.

"The subjective feedback so far from patients to surgeons is very positive," he said. "The quality of vision shows dysphotopsia occurrence is relatively low with this lens."

Dr Güell concluded that while the ArtiPlus data so far was very promising, only long-term prospective evaluation will clarify the comparative efficacy-safety ratios of phakic IOLs with other surgical strategies for presbyopia.

Dr Güell presented these findings at the 2023 ESCRS Winter Meeting in Vilamoura, Portugal.

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