

Preliminary analysis

Initial experience good with accommodating IOL

No major complications, no glare or halos found; patient satisfaction high

By Lynda Charters

Reviewed by George Beiko, BM, BCh, FRCS

San Francisco—In an initial analysis, the Synchrony dual-optic single-piece IOL (Visiogen) performed well. The visual results were good, there were no major complications and no glare or halos after implantation, and patient satisfaction was high, according to George Beiko, BM, BCh, FRCS.

“Multifocal IOLs have two major problems. They have the photic phenomenon . . . and there is about a 25% decrease in contrast sensitivity over that with a monofocal IOL,” said Dr. Beiko, who reported his experience at the American Society of Cataract and Refractive Surgery (ASCRS) annual meeting.

Accommodating IOLs, he explained, may overcome these problems.

“The theoretical advantages of a dual-optic accommodating IOL are that the smaller amount of movement of the lens provides a greater effect and there is consistency over the entire visual range as opposed to a single-optic IOL,” said Dr. Beiko, who is in private practice in St. Catharine’s, Ontario, Canada.

The Synchrony IOL is a large (9.5 × 9.8 mm overall) single-piece silicone lens that is designed to fill the capsular bag. It has

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a high plus power (+32 D) anterior optic and a minus posterior optic. Some features of the Synchrony IOL construction may contribute to the good results achieved with the IOL.

“The anterior optic is constructed with a number of channels that are designed to allow fluids to go inside the bag and prevent the capsule from shrink wrapping around the lens,” he said. “This is a change from other lenses.”

Dr. Beiko said that the IOL has posterior stabilizers that allow the lens to center in the eye and prevent decentration, pillars that maintain the IOL in the open position and accentuate the movement of the anterior optic, and displacement limiters that prevent the two optics from coming into contact with each other.

The biocompatibility of the lens was studied in rabbits by Liliana Werner, MD

Take-Home Message

The Synchrony dual-optic single-piece IOL (Visiogen) performed well in a preliminary analysis. The visual results were good, there were no major complications, no glare or halos after implantation, and patient satisfaction was high.

(Interlenticular Opacification with Dual Optic and Piggyback IOLs, presented at ASCRS 2006). The IOLs were implanted and after follow-up of 12 months, no problems developed.

“There was no fibrosis or phimosis as seen with plate haptic IOLs,” Dr. Beiko said.

Dr. Beiko recounted his experience with the Synchrony lens when it was implanted in 15 patients who were an average of 76 years of age; 85% were women. To have the IOL implanted, the patients had to be over 50 years of age, have a cataract, and have no astigmatism or other corneal or retinal pathologies. Intraoperatively, Dr. Beiko noted that the capsulorhexis must be 4.5 to 5 mm to cover the anterior optic. The IOL is inserted using a preloaded injector through an incision that ranges from 3.6 to 3.8 mm; the IOL itself is almost 10 mm in size.

The introduction of the injector for this lens has been highly advantageous because it simplified the implantation of the IOL.

Thus far, 13 of the 15 patients have had 1 month of follow-up, 10 patients have had 3 months of follow-up, and six patients have been followed for 6 months. One month after implantation, the spherical equivalent was slightly myopic and by 6 months slightly hyperopic. Dr. Beiko could not report the specific results at the time of this presentation because, as he explained, the data are part of the FDA trial and could not be divulged at that time.

“There were no major complications associated with the implantation of the lens,” Dr. Beiko said. “Aqueous misdirection occurred in one patient. My patients are very happy. My first patients were 85 years old and they were ecstatic with their distance and near vision. There have been no reports of glare or halos.” **OT**

FYI

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Dr. Beiko has no proprietary interest in any aspect of this report. The Synchrony lens (Visiogen) is currently in clinical studies in the United States and recently received a CE Mark in Europe.