

Inside this Issue

Collamer IOLs compared favorably with silicone and acrylic lenses in a study conducted by Elizabeth A. Davis, MD, of Minnesota Eye Consultants.

STAAR Surgical Company has submitted the final module of its premarket approval submission for its Implantable Contact Lens to the U.S. Food and Drug Administration.

Test drive STAAR's innovative Cruise Control device.

STAAR Collamer® IOL Induces Fewer Higher-Order Aberrations Than Silicone and Acrylic Lenses

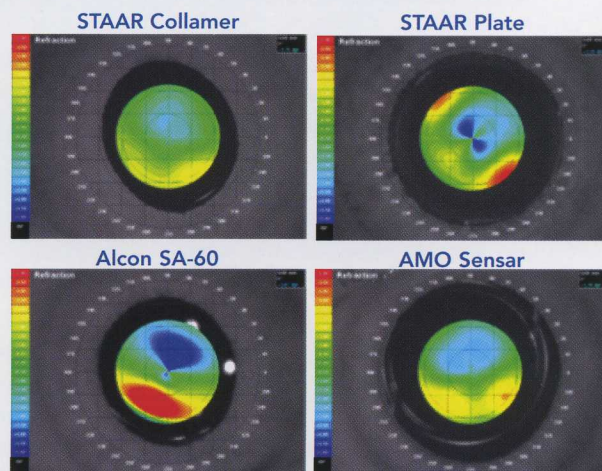
By R. Gale Martin, MD

STAAR Surgical's collamer intraocular lens (IOL) induced fewer higher-order aberrations than three other intraocular lenses in a study conducted to determine if implantation of different foldable lens designs results in different amounts of higher-order aberrations.

Patients in the study had Tracey visual function analysis (VFA) performed on their eyes prior to undergoing cataract extraction and a week postoperatively. The Tracey VFA uses a unique patented laser ray-tracing technology to measure and map 100% of the refractive power of the eye.

The study, conducted at our clinic in Panders, North Carolina, included 80 eyes of 80 cataract patients. The patients were randomly assigned to receive one of four foldable lens designs: STAAR single-piece collamer, STAAR single-piece silicone, ALCON SA-60 acrylic and AMO Sensor acrylic.

All pre- and postoperative measurements of



Postop Average H.O. Aberrations

higher-order aberrations were done with a 4.5 mm pupil size. Preoperatively, there was no statistical difference in the higher-order aberrations of the patients. Patients in the STAAR collamer group averaged 0.33 root mean square (RMS), in the STAAR silicone group, 0.31; in the Alcon acrylic group, 0.32; and in the AMO acrylic group, 0.29.

CONTINUED ON PAGE 3

The Phaco Surge Protector: Cruise Control Provides for Safer, Faster and Cleaner Procedures

By I. Howard Fine, MD

STAAR Surgical's "Cruise Control" system improves the safety, speed and efficiency of phacoemulsification by facilitating improved anterior chamber stability, by enabling the use of larger phaco tips and higher vacuum, and by blocking cataract debris from the aspiration tubing.

The Cruise Control device utilizes a micropore filter that fits on the aspiration line between the phaco handpiece and aspiration tubing. It captures nuclear material and, as a result, enhances the safety and efficiency of phaco procedures by eliminating surges and minimizing the unpredictable effects of occlusions and stagnation in the aspiration line.

The device itself is a cylinder within a cylinder. Everything that comes out of the

handpiece flows into a mesh-like cylinder. Water can flow through the device, but cataract material is filtered out. Removing the phaco debris prevents material from clogging the aspiration tubing.

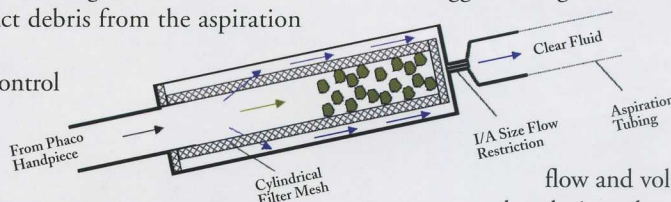
Clogged tubing retards flow and leads to

surges when pressure is released after the line clears. It is the changes in

flow and volume that cause

unexpected occlusions that can result in chamber collapse or vault.

The use of Cruise Control minimizes the chamber trampolining or surging that often occurs in conventional phaco procedures when breaking occlusions. Occlusions can cause pressure in the eye to become negative, and sudden surges can result in dimpling or even collapse of the anterior chamber.





1911 Walker Avenue
Monrovia, CA 91016
United States
www.staar.com

FREE TRIAL

Test Drive STAAR's Cruise Control

Cruise Control is an innovative device developed by STAAR as a filter between the phaco handpiece and aspiration tubing. Cruise Control, which can be used with most phaco systems, captures nuclear material and enhances the safety and efficiency of phaco procedures by eliminating surges and stabilizing the anterior chamber.

To receive four free Cruise Control units to try with your phaco system, just call us at 1-800-352-7842 (from outside the U.S., call +41 32 332 8888) or click on the Cruise Control link at www.staar.com

 **CruiseControl**
For faster and cleaner phaco procedures

Cruise Control

CONTINUED FROM PAGE 1

As long as the eye is exposed to the atmosphere, intraocular pressure will remain above atmospheric pressure and the chamber won't collapse. But when an occlusion causes pressure inside the eye to fall below atmospheric pressure, the result can be chamber collapse or posterior capsule vaulting.

Cruise Control functions like a surge protector—keeping intraocular pressure from falling below atmospheric pressure when there is an occlusion. Also, because lens material is not being removed through the aspiration tube, irrigation inflow can be restricted in order to reduce surges associated with unrestricted flow in the phaco tube.

Since there is not any solid material outside the filter, a flow restriction the size of an I/A port is placed in front of the aspiration tubing. The I/A size restriction reduces the vacuum surges generated during phaco to I/A levels. Cruise Control limits the flow in a nonlinear manner so that only excessive flows are limited. But regular flow rates, below 50 cc/min, are not affected.

Cruise Control is compatible with both peristaltic and venturi phaco machines. It can easily be added to most existing phaco systems, attaching to the aspiration port on the phaco handpiece. We have tested it on several different machines and the results have been stable and consistent.

I. Howard Fine, MD, is clinical professor, Casey Eye Institute, Oregon Health and Sciences University, Portland, and in private practice at Oregon Eye Associates, Eugene. Contact him at 541-687-2110, fax 541-484-3883, hfine@finemd.com.