# Experts discuss controversies in cataract surgery

**by Chiles Samaniego**
**EyeWorld Asia-Pacific Senior Staff Writer**


**Dr. Tassignon discusses the treatment of floaters in a presentation at the 30th APAO Congress in Guangzhou, China. Source: ASCRS**

*Physicians discuss hot topics in the subspecialty at spring meeting*

**E**xperts voiced differing views on "Controversies in Cataract Surgery" in a symposium at the 30th Asia-Pacific Academy of Ophthalmology (APAO) Congress in conjunction with the 20th Chinese Ophthalmological Society Congress, Guangzhou, China.

Richard Packard, MD, London, began with a particularly contentious topic—and perhaps an even more contentious perspective. In his talk, Dr. Packard launched on a comprehensive takedown of femtosecond laser cataract surgery.

In the last 47 years since Charles Kelman performed the first phacoemulsification on a blind eye, the procedure and the technology has evolved to incorporate features such as microincisions, using devices that have power modulation and exquisite control of fluidics to make the procedure easier, safer, with a low risk of posterior capsular opacification. Meanwhile, femtosecond lasers have only been around in the last decade or so, during

which time they have shown utility in a number of different ophthalmic applications. But Dr. Packard wondered about the future of the femtosecond laser in cataract and refractive lens exchange surgery.

Those who make the claim that the femtosecond laser is the next step in cataract surgery make an implication that Dr. Packard chooses to interrogate critically: Will it be an improvement in our current cataract procedure? More to the point: Will our procedure be worse without it? Dr. Packard cited data from studies that call into question some of the presumed advantages of the femtosecond laser over microkeratomes. For instance, while the capsulorhexis may be more accurate with femtosecond lasers, there are studies that show no or at least clinically insignificant correlation between shape and position with refractive outcome. Meanwhile, there are studies that show a significantly greater risk of anterior capsule tears with lasers, which create "micro can opener" rather than smooth incision edges. According to Dr. Packard, the current data confirms that there is no real need for the femtosecond laser in terms of creating the incision, the capsulorhexis, or even speed; in terms of visual outcomes, femtosecond lasers provide only marginally better results that are not clinically significant.

All Dr. Packard said, admitted John Chang, MD, Hong Kong, is true. However, Dr. Chang's perspective paints the picture "slightly brighter." "We are in our infancy with femtosecond laser technology," Dr. Chang said. He compared femtosecond lasers today with phacoemulsification technology at the height of ECCE—at the time, phaco, too, seemed to many unjustifiably expensive with questionable advantages over the established procedure.

Dr. Chang reiterated the precision of the capsulorhexis with femtosecond lasers, highlighting its effect on (and the value of) effective lens position. Controlling the size allows surgeons to position the lens the way

they want inside the capsular bag. Moreover, precision in the capsulorhexis and so also lens position in terms of tilt minimizes the risk of posterior capsule opacification (PCO).

In terms of cumulative dissipated energy (CDE), Dr. Chang said that the energy used after femtosecond laser fragmentation of the cataract is significantly less than the conventional group, though only in Grade 2 cataracts. This translates into a significant reduction in loss of endothelial cells.

Finally, Dr. Chang cited a soon-to-be-published study by Chee Soon Phaik, MD, Singapore, in which the number of patients achieving uncorrected visual acuities (UCVA) of 20/20 or better was found to be significantly higher ($p=0.002$) using the femtosecond laser. This, he said, will be the first study showing better visual outcomes with the femtosecond laser. He believes it is indicative of a future in which femtosecond lasers in cataract surgery finally outstrip phacoemulsification the way the latter technology outstripped ECCE.

In the same symposium, Dennis Lam, MD, Hong Kong, and Marie-Jose Tassignon, MD, Antwerp, Belgium, considered differing views on the treatment of floaters. According to Dr. Lam, floaters are more of a symptom than a disease per se, and are mostly harmless. However, he said, in some cases they are warning signs of serious underlying conditions that must be treated. In terms of just what floaters are, Dr. Tassignon said there are 3 classifications: type I floaters are well-defined and suspended floaters; type II are multiple floaters dispersed in the vitreous; and type III floaters are well-defined floaters for the patient that are invisible for the clinician. In any case, when faced with floaters, Dr. Lam said, intervention is worth considering.

Dr. Lam went on to describe his method for treating floaters: 2-port pars plana vitrectomy (partial PPV).

This method is performed under topical anesthesia—a great advantage for treating floaters since it allows direct communication

with the patient throughout the procedure; the surgeon can ask the patient to confirm clearance of floaters. Dr. Lam said this method is a cost-saving procedure compared with full PPV and can be performed with or without cataract surgery.

The initial results are very encouraging, though Dr. Lam and his colleagues continue to refine and enhance the technique.

Meanwhile, Dr. Tassignon recommended using the YAG laser on type I floaters—although, she said, she is "not convinced YAG only is enough." She thinks the best solution will be a blended approach to homogenize the vitreous. Finally, Boris Malyugin, MD, Moscow, and Amar Agarwal, MD, Chennai, India, offered different approaches to cataract surgery cases with poor capsular support.

For Dr. Malyugin, the capsule remains his "favorite IOL support," to which end his preferred approach is to use capsular tension rings—including his own Malyugin capsular tension ring.

Dr. Agarwal, on the other hand, demonstrated a technique in which he inserts a glued IOL under a subluxated lens, using the IOL as a scaffold. This way, he said, "I have created my own posterior capsule." Dr. Agarwal also demonstrated one of the advantages of using tissue glue instead of sutures to fixate IOLs. Presenting slow motion videos of sutured and glued IOLs, Dr. Agarwal demonstrated the absence of pseudophacodonesis in glued IOLs.