Surgeon shares pearls on managing complex femtosecond cataract cases

Femtosecond laser-assisted cataract surgery in complicated cases may require special maneuvers and measures, a speaker told colleagues here.

Sonia H. Yoo, MD, presented pearls on handling complicated femtosecond laser cataract cases at Hawaiian Eye 2015.

Sonia H. Yoo

At least 2% of eyes have a pupil diameter of 5 mm or less. Causes of small pupil include pseudoexfoliation, synechiae, diabetes, advanced age, intraoperative floppy iris syndrome and chronic miotic therapy, Yoo said.
"These are all common causes, and we've become fairly comfortable with surgical management of small pupils, at least for conventional phacoemulsification surgery," Yoo said.

Strategies to manage small pupils in conventional phacoemulsification include viscodilation, synechiolysis, pupil stretching, iris hooks and Malyugin rings.

"But all of these manipulations require anterior chamber penetration," Yoo said. "What do we do in case of small pupil in a femtosecond cataract case?"

Yoo said that in femtosecond cases with small pupils, small bubbles in the interface or in the anterior chamber can interfere with imaging of the capsule. These bubbles are typically non-problematic in conventional phacoemulsification, she said.

"You can try to aspirate these bubbles and make sure that you fully fill the anterior chamber with viscoelastic. And if you do, you can, in fact, perform your femto laser capsulotomy and lens segmentation with a ring in place, particularly in the lower vacuum systems," Yoo said.

In femtosecond cases involving Malyugin rings, the surgeon should increase height and energy of the capsulotomy in cases with rings, hooks or viscoelastic, Yoo said.

In femtosecond cases in patients with implantable contact lenses, Yoo suggested increasing the capsulotomy height, increasing vertical spot spacing to reduce the collection of bubbles under the implantable contact lens, and increasing the anterior and posterior safety zones. – *by Matt Hasson and Nhu Te*

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