Meeting Notes from VBS 2.0 Las Vegas

Saturday, March 15: Complications

The Vit-Buckle Society (VBS) is a forum for “innovative vitreoretinal surgeons to share best practices, to foster the development and use of novel surgical technologies and strategies for retinal diseases, and to demonstrate the value of mentorship of emerging vitreoretinal surgeons.” The mission statement of the VBS was in full display at the society’s second annual meeting, VBS 2.0, which took place on March 14 and 15, 2014, in Las Vegas, Nevada.

Of particular importance to the society, is “mentorship of emerging vitreoretinal surgeons.” The Vit-Buckle Society Fellows Foray is an open forum where vitreoretinal fellows present challenging surgical cases to a panel of experts. The foray took place on March 14th, and was a huge success in providing a platform for vitreoretinal surgeons to discuss current challenges in vitreoretinal surgery among their peers and to learn from experts in the field. The VBS Fellows Foray has been a successful component of the VBS annual meeting since its inception in 2013. Participation by vitreoretinal fellows in the VBS annual meeting is a critical part of the mission of the Vit-Buckle Society, and the VBS Fellows Foray provides the means by which these fellows can participate. There is a lot of excitement about next year’s VBS meeting in Miami Beach where there will be a contest to find and discuss the most interesting retina surgical complication videos. See the Vit-Buckle Society 2015 meeting website for details.

In addition, the participating fellows play an integral role in the note taking process of the meeting, allowing for a synopsis for those of you who were unable to attend. New Retina MD is pleased present an ongoing series of notes from the meeting. Here, Mrinali Patel Gupta, MD, a second year vitreoretinal fellow at Weill Cornell Medical College, recaps the session on complications and controversies surrounding vitreoretinal surgery.

“The only real mistake is the one from which we learn nothing.” –Henry Ford

LENS OPACITY SECONDARY TO LENS STRIKE WITH THE VITRECTOR

Dr. Andrew Schimel presented a talk on “Complications and Controversies,” in which he discussed complicated videos sent in from outside retinal surgeons. The first case was a 23-gauge vitrectomy for a macula off retinal detachment. During draining of fluid of the superior break, the vitrector hit the lens with some lens whitening noted immediately afterwards. There was no posterior capsular defect and the view thereafter was slightly impaired.

Given The Mild Lens Opacity From The Vitrector Hitting The Lens, What Would You Do Next?

A discussion ensued regarding whether the lens should be taken or left in place. The overwhelming consensus from the participants was that the lens should not be taken if the posterior capsule is not ruptured. It will likely not become cataractous if the lens was simply struck by the vitrector. On the other hand, a cataract is likely to develop in cases where the lens is struck with the vitrector port toward the lens and part of the lens is removed. In such a case, removal of the lens during the same surgery might be more strongly considered, although on occasion the defect will seal up without causing a significant cataract.

Similarly, Dr. Schimel presented a case of an epiretinal membrane (ERM) with a full thickness macular hole in which the lens was struck, resulting in a view which was too hazy to safely peel the ERM. There was some discussion on whether the lens should be removed and the ERM peel completed, or whether the surgery should be stopped so that the patient could be referred to an anterior segment surgeon for cataract extraction, with subsequent vitrectomy and ERM peel at a later date. During the discussion with meeting participants, some advocated for removing the lens and completing the ERM peel, while most recommended cataract extraction with lens implantation by an anterior segment surgeon, followed by ERM peel, given the nonurgent nature of the macular surgery.

The session moderators brought up a question about the utility of combined phacoemulsification/vitrectomy versus a staged procedure where the cataract extraction
and vitrectomy are performed at different times. Dr. Steve Charles highlighted the importance of considering refractive outcomes when retinal surgeons versus anterior segment surgeons perform cataract surgery. Given the increased expertise of anterior segment surgeons in lens selection and the increasing use of postsurgical refractive adjustments, anterior segment surgeons may be able to offer a better ultimate refractive outcome.

A third video about draining during retinal detachment surgery led to discussion on posterior drainage retinotomy versus perfluorocarbon versus avoiding both and draining through the existing break with occasionally leaving some posterior fluid at the end of the case. The consensus was that all are reasonable options although most of the participants felt that the latter is preferable when possible, given that development of a fold is rare even with some residual posterior fluid.

ANTERIOR MIGRATION OF AN INTRAVITREAL DEXAMETHASONE IMPLANT

Dr. Rahul Khurana presented on “Dexamethasone Implant Migration.” He presented several cases of dexamethasone implants (Ozurdex, Allergan) placed for edema secondary to vascular occlusion or uveitis in which the implant migrated anteriorly into the anterior chamber or angle (Figure), presumably through an iridotomy or through the pupil in cases lacking an intact posterior lens capsule.

In Cases Where There Is Anterior Displacement Of The Dexamethasone Implant, What Would You Do?

There was a discussion of whether an implant can be left in the anterior chamber, and the overwhelming consensus was that it needs to be removed. Surgical techniques for anteriorly migrated dexamethasone implants were discussed. Dr. Maria Berrocal described a technique of “pushing” the implant posteriorly using a 30-gauge needle.

Dr. Khurana showed a video of how Drs. Justin Townsend and Steven Yeh removed a migrated implant. A modified sheets glide was cut to approximately 3 mm in width to cover the peripheral iridectomy and pupil. A 2.8 keratome was used to create a biplaned superonasal clear corneal incision. Viscoelastic was injected over an inferior peripheral iridectomy site to prevent posterior migration of the dexamethasone implant during the surgery. A Sinsky hook was used to free the implant from the anterior chamber angle and orient it parallel to the Sheets glide. An angled McPherson forcep was used to grasp the implant parallel to its long axis and avoid dissolution of the implant into multiple particulate fragments. Following successful explantation of the dexamethasone implant, the viscoelastic was removed and the corneal wound was closed with a 10-0 nylon suture.

Another photograph in which a dexamethasone implant was lodged between the iris and capsule was shown, and again the consensus was to push it back, perhaps with a 30-gauge needle, as Dr. Berrocal suggested. In this case, the implant was actually lasered with a nd:YAG.

Dr. Khurana concluded with the results of a 15 patients with dexamethasone implant migration. All patients had a prior vitrectomy and 93% had loss of the lens capsule. Six patients were aphakic, 4 had anterior chamber intraocular lenses (IOL), 2 had posterior chamber IOLs and 1 had an iris-fixated IOL. The average time for migration to the anterior chamber was 13 days after injection. Fourteen of the 15 cases had corneal edema, and among those with edema, 6 required corneal transplantation. In 6 cases, the implant was friable, requiring aspiration for removal. He concluded his talk with some management strategies based on the appearance of corneal edema (Table).

### TABLE. MANAGEMENT STRATEGIES FOR A DEXAMETHASONE IMPLANT MIGRATED TO THE ANTERIOR CHAMBER

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<th>If no corneal edema is present:</th>
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<td>• Observation</td>
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<td>• Positioning Supine with dilation followed by pilocarpine</td>
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If corneal edema is present:

- Remove the implant urgently to prevent permanent corneal edema
- Forceps removal of implant
- Aspiration if the implant is friable
- May need vitreoretinal instrumentation

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Figure. A dexamethasone implant that has migrated to the anterior chamber.