A former solution becomes an ugly problem, and a pediatric patient presents with a surprise membrane.

BY MICHAEL A. KLUFAS, MD

Hydrogel Explant Removal Following Partial Extrusion

Video submitted by Courtney Crawford, MD, and Chirag Shah, MD

Courtney Crawford, MD, and Chirag Shah, MD, present a difficult case of an intruding and extruding hydrogel buckle element with intraoperative scleral rupture. The Miragel hydrogel scleral buckle (Mira) was developed in the mid-1980s as an alternative to traditional silicone exoplants. It was touted as a new element to reduce the incidence of scleral erosion and to decrease postoperative infection by eluting antibiotics. These buried treasures from Boston are now being unpleasantly discovered by retina specialists as they undergo unanticipated hydrolytic degeneration.

In a large series of 467 eyes at a single institution that underwent removal of these scleral buckles, the rate of retinal redetachment or intraoperative scleral rupture was 11%. Application of boric acid can shrink the hydrated exoplant, and use of cryocoagulation may facilitate removal, particularly of radial exoplants. To minimize scleral perforation, it is important to maximize exposure of the exoplant with a generous conjunctival peritomy, cut all sutures, and remove any encircling band prior to attempting removal of the Miragel element. The sclera should be inspected thoroughly and, in case of perforation, a patch graft applied. Given that the surface tension of air or gas is greater than that of silicone oil, placement of expansible gas with a pressure patch may be considered if continued leakage occurs.

Pediatric Terson Syndrome

Video submitted by Colin McCannel, MD, and Michael A. Klufas, MD

Dr. McCannel and I present a case of Terson syndrome in a 15-year-old child who presented with nonclearing vitreous hemorrhage. Upon removal of the vitreous hemorrhage, we noted an old sub–internal limiting membrane (ILM) hemorrhage with dehemoglobinized red blood cells. The ILM was peeled without staining, and the red blood cells were removed with a brush soft tip back flush.

Terson syndrome is characterized by any intraocular hemorrhage (vitreous, sub-ILM, intraretinal, and/or subretinal) in association with intracranial hemorrhage. Pars plana vitrectomy (PPV) may be performed to remove vitreous hemorrhage, and other surgery techniques may be used to address other complications such as hemorrhagic macular cyst.

Cases of Terson syndrome treated with PPV but no ILM peel can develop a perimacular ring, which may occur secondary to detachment of the ILM.1,2 This may provide a scaffold for epiretinal membrane (ERM) to develop, and, if severe, proliferative vitreoretinopathy can occur. The goal of peeling the ILM in this case was to remove the retained red blood cells that could contribute to a secondary glaucoma and potentially prevent ERM formation that may lead to visual morbidity. Nevertheless, in any patient, particularly in pediatric patients, a risk-benefit analysis of each surgical step, such as ILM peel, should be carefully weighed.


Section Editor Michael A. Klufas, MD
vitrectomy surgeon, Mid Atlantic Retina, Philadelphia (beginning August 2016)
retina chief, Eyetube.net
financial interest: consultant for Allergan
@NJRetinaDoc; mklufas@gmail.com

WANT TO SHARE A VIDEO?
Sign into your Eyetube account, hover your cursor over your avatar in the upper right corner of the page, and select “Submit Video.”