

Retina Re-Attachment Surgery

By Jessica Tremayne

Because of the skill level, cost and time involved in treating retinal detachments, only a few veterinary ophthalmologists perform the procedure in the U.S., says Robert Munger, DVM, Dipl. ACVO, of Animal Ophthalmology Clinic in Dallas.

“Retina issues are some of the most challenging cases that a veterinary ophthalmologist can be presented with,” Dr. Munger says. “Because of the difficulty with the procedure, those who perform the procedure often get referrals from other ophthalmologists in addition to primary caregivers.”

Brad Nadelstein, DVM, Dipl. ACVO, of Animal Eye Care in Virginia Beach, Va., is one of the U.S. vets who perform retina reattachment surgery. He gets referrals from ophthalmologists all over the East Coast.

“There is a long learning curve,” Dr. Nadelstein says. “It took about five years of practicing this surgery before I felt confident. A surgery initially took me eight to 10 hours, and now after 12 years of surgery it generally takes two to four hours.”

The procedure requires, in part, making three microsurgical incisions. One hole is for a light source, one for vitreous and one to remove fluid.

“Vitreous is the transparent jellylike substance behind the lens of the vertebrate eye,” Nadelstein says. “It gives rigidity to the spherical form of the eye and allows light to pass through to the retina. We first remove the vitreous gel from the back of the eye. Then we fill up the eye with a heavy fluid called perfluoro-octane to push the retina back in to its normal position.

“If you think of the retina as a wet piece of tissue paper, you can visualize the fluid pushing the retina back on. We use a laser to ‘weld’ the retina back on, which will take two to three weeks to fully form. Lastly, we remove the heavy fluid from the eye and replace it with silicone oil, which rises to the surface and holds the retina in place.”

Nadelstein says specialists who perform the surgery look for two types of success: anatomic and function.

“We are about 92 percent successful in accomplishing anatomic success and 75 to 85 percent successful with restoring function,” he says. “This statistic is taken from the 50 to 75 annual cases seen. Out of these cases, about half of the patients’ retinas become detached following cataract surgery. This number can sound misleading. Out of the thousands of cataract surgeries performed a year, only 1 to 2 percent result in a retinal detachment.”

Nadelstein says 80 percent of his patients are canine and the rest feline. One message of care to owners is to ensure the animal doesn’t shake its head after surgery. Shaking can damage the formation of burns formed by the laser on the retina.

“This surgery isn’t commonly taught in school, so I trained with human ophthalmologists,” Nadelstein says. “With retina surgery, the return to vision isn’t as immediate as in cataract surgery, but the gratification is just as great.