

Bleb less Glaucoma Surgery: A Minimally Invasive Therapy Offered to New Mexicans



These procedures are often the best choice in a patient with severe or rapidly worsening glaucoma. However they are not without considerable risk. In an effort to lower the risk, new surgical options have been developed and may be utilized in a subset of patients, particularly in cases where creating a bleb may not be ideal. Dr. Davis brings this innovative surgical procedure, also called “Bleb-less glaucoma surgery,” such as Ab-Interno Trabeculectomy and I-stent (Glaukos), to New Mexicans at the VA and UNM hospital. The I-stent device, which also works to enhance the natural drainage system of the eye, is the smallest implantable medical device approved by the FDA for human use.

For more than a year now, veteran Albert Kraus has not had to use any eye drops for his chronic glaucoma condition. He had been using several medicated drops for years before. However, a surgical procedure, now available in New Mexico and performed by **Rachel Davis, MD**, Assistant Professor of Ophthalmology has kept Mr. Kraus’ eye pressure under control without the use of eye drops and without some of the serious side effects of traditional glaucoma surgery. The procedure called Ab-Interno Trabeculectomy removes tissue from the eye’s internal drainage system known as the trabecular meshwork. An electro-surgical hand-piece called Trabectome (Neomedix) removes the tissue. “Because it is all internal and can be performed through a small clear corneal incision, it creates no scarring of the conjunctiva. This was extremely important in Mr. Kraus’ case because along with his advanced glaucoma, he also has a condition called ocular cicatricial pemphigoid or OCP which causes inflammation and scarring of this tissue. Both the glaucoma eye drops and traditional glaucoma surgery could have made this disease significantly worse.” remarks Davis.

“When I met Mr. Kraus in 2014, he was using 2 medicated eye drops to lower his eye pressure and treat his glaucoma, and was intolerant to many other medications due to their irritating side effects. However his biopsy proven OCP was progressing and his eye pressure and glaucoma were still not adequately controlled,” adds Dr. Davis.

If treatment with medications and laser fails, surgery becomes necessary to prevent further vision loss. Conventional glaucoma surgery includes trabeculectomy and tube shunts. Both of these procedures involve by-passing the natural outflow system of the eye and creating a new artificial drain called a bleb.



Rachel Davis, MD
Assistant Professor

Medicated drops for the treatment of glaucoma can be brutal on the eye surface, causing inflammation that can worsen OCP. “My goal in treating Mr. Kraus was to reduce his dependence on these drops while improving the treatment of his glaucoma. Because his conjunctiva was severely scarred, it was best to avoid any bleb creating glaucoma surgery” said Dr. Davis. Therefore, she chose to perform Trabectome surgery along with cataract removal. “We do not have a cure for glaucoma, however these surgical procedures are giving us ways to halt the disease. So far, we were very pleased with the results in Mr. Kraus and for the past year there has not been any further progression of his glaucoma. We have also worked closely with Rheumatology to place him on steroid sparing therapy to help his OCP,” says Dr. Davis.

New Mexico has a high prevalence of glaucoma with nearly 3% of our population suffering from primary open angle glaucoma, the most common type of glaucoma. This burden is expected to double over the next 40 years making New Mexico a state with the highest rate per capita.

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