

AMD drug and IOP; getting good eyeglasses to those in need

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A first-time finding of intraocular pressure increases in patients with no personal or family history of glaucoma following anti-VEGF treatment for wet age-related macular degeneration (AMD), and a report on a simple, low-cost method that could revolutionize vision screening and treatment in developing countries, are highlights of today's Scientific Program of the 2009 Joint Meeting of the American Academy of Ophthalmology (AAO) and the Pan-American Association of Ophthalmology (PAAO).

The AAO-PAAO meeting is in session October 24 through 27 at the Moscone Center, San Francisco, CA. As the largest, most comprehensive ophthalmic education conference in the world, it offers United States and international [Eye](#) M.D.s more than 2,000 scientifically-based, peer-reviewed presentations including instruction courses, skills labs, "Breakfast with the Experts" roundtables and 900 research papers and posters.

Wet Macular Degeneration Treatment May Increase Intraocular Pressure

Some patients with age-related macular degeneration (AMD) develop elevated pressure within the eye (intraocular pressure, IOP) following treatment with anti-VEGF medications [bevacizumab](#) and/or ranibizumab, reports a Yale University School of Medicine study led by Ron A. Adelman, MD, MPH. Both of these anti-VEGFs control the

abnormal growth of blood vessels in the eye's retina and are very effective against wet AMD, which can result in vision loss or blindness if untreated. But high IOP is a key factor in glaucoma, also a potentially blinding disease. Of 116 Yale study patients treated for wet AMD with either or both medications from 2006 to 2008, 3.45 percent (four patients) developed a significant and persistent rise in IOP.

"To our knowledge, ours is the first study to document persistent ocular hypertension (OHT) following intravitreal bevacizumab injections in patients with no personal or family history of glaucoma or ocular hypertension (OHT)," Dr. Adelman said. "We found that sustained, high IOP may occur after only one anti-VEGF injection, but more typically after multiple injections. Patients' OHT may continue over several AMD treatments and may require IOP-lowering therapy," he added.

The researchers also reviewed a report by S.F. Bakri and colleagues on persistent OHT after ranibizumab treatment. Of eight OHT patients total in the two studies, four had received a YAG posterior capsulotomy (a procedure related to cataract surgery) prior to wet AMD treatment, which might have predisposed them to OHT, Dr. Adelman said.

New Screening Method Could Mean Clear Vision for Millions

More than 150 million people globally-particularly in developing countries-struggle with poor vision because they cannot access appropriate eyeglasses. Earlier studies indicated that many could not meet the 20/60 vision driver's license standard, a level of impairment that makes daily tasks and economic success difficult. Seeking a low-cost solution, Thomas S. Shane, MD, Bascom Palmer Eye Institute, University of Miami, developed a method that uses a new electronic device called an auto-refractor, a vision chart, and pre-made eyeglasses.

Dr. Shane tested this method in high-poverty Mayan villages in southern Belize. Local health workers recruited people, and everyone over age 12 who came to the clinic within a five-day period was tested. In less than a minute per patient the auto-refractor assessed vision and reported the patient's lens prescription. Of 385 villagers screened 79 needed eyeglasses. Each person received new, pre-made eyeglasses with the appropriate lens strengths; then vision was tested again. On average, [vision](#) improved from 20/60 without glasses to 20/25 with glasses.

"This method requires minimal health care worker training and treatment time per patient," Dr. Shane said. "Costs are further minimized because eyeglasses with a range of lens prescriptions to treat the most common refractive errors could be produced and shipped in bulk. Compared to current practices in developing countries, our method may be much more effective, especially where the need is great but resources are limited."

Source: American Academy of Ophthalmology

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