

Glaucoma-The Silent Thief (By Arun Prasad, MD)

January is the National Glaucoma Awareness Month. Glaucoma is one of the leading causes of blindness and in most cases is preventable.

What is Glaucoma? Glaucoma is an eye disease that causes damage to the optic nerve—the structure that connects the eye to the brain, transmitting visual stimuli to the brain. In most cases, glaucoma is a silent disease. Most people have no symptoms, and there may be no warning signs. This is because peripheral vision is lost first. In fact, up to 40% of vision can be lost before vision loss is noticed. Only in advanced glaucoma is central vision affected. And once optic nerve damage occurs, it is permanent and irreversible.

Statistics. Approximately 2.22 million Americans have glaucoma, but it is estimated that only half of those people know they have it. By the year 2020, it is estimated that 3.36 million people will have glaucoma. African-Americans are 6 to 8 times more likely to have glaucoma. In addition, according to the World Health Organization, glaucoma is the second leading cause of blindness worldwide.

Types of glaucoma. Glaucoma can roughly be broken down into open-angle and angle-closure. Both forms generally involve a high eye pressure. One subtype of open-angle glaucoma is normal-tension glaucoma, in which the eye pressure is technically within “normal” limits. Open-angle glaucoma tends to be slowly progressive and chronic while angle-closure may develop more rapidly and can be painful.

Risk factors. Most forms of glaucoma affect the middle-aged and elderly. However, glaucoma can affect anyone, including newborns. Risk factors include high intraocular pressure (also known as IOP), race, age above 60, family history of glaucoma, corticosteroid use (such as the anti-inflammatory medication prednisone as well as inhaled and topical steroids), thin corneas, a history of eye injury, diabetes, myopia (nearsightedness), sleep apnea, and high blood pressure.

High IOP is one of the major risk factors. All eyes have a certain pressure that is necessary to maintain proper eye health. Usually, this ranges from 10 to 22 mm Hg. Anything above that is considered high. Generally, there is no pain associated with increased intraocular pressure. Regarding race, African-Americans, Hispanics, and Asians are at a higher risk. While African-Americans are more prone to developing open-angle glaucoma, people of Asian descent are at a higher risk of developing angle-closure glaucoma.

Treatment. There is no cure for glaucoma—at least not yet. That makes it imperative to have regular dilated eye exams to detect optic nerve damage. Your doctor will perform various tests to evaluate the health of the eye and the optic nerve. This includes checking your IOP, performing a visual field test to evaluate peripheral vision, gonioscopy to evaluate whether the angle is open or closed, pachymetry to evaluate the thickness of the cornea, and taking a photograph of the optic nerve to document its status. Newer devices

such as the OCT (optical coherence tomography) can be used to analyze the health of the optic nerve in more detail and provides quantitative data for comparison over time.

Treatment options include eyedrops, oral medication, laser surgery, and incisional surgery in the operating room. The treatment modality chosen depends on the type of glaucoma and the severity of the disease. The goal of treatment is to lower the IOP to an acceptable level, at which the risk of progression is decreased. That “target” IOP differs from person to person and needs to be determined by your doctor. If you have been diagnosed with glaucoma, treatment can help maintain optic nerve health, which ultimately preserves vision.

Regular eye exams. Regular dilated eye exams are essential for detecting glaucoma and to monitor the status if you have already been diagnosed. Visit the Glaucoma Research Foundation website at www.glaucoma.org for more information and to request a free brochure on glaucoma. Another excellent source of information is the Glaucoma Service Foundation to Prevent Blindness website at www.willsglaucoma.org.

Arun Prasad, MD, is a board-certified ophthalmologist who practices general ophthalmology and glaucoma in Concord, CA at Muir Eye Care (www.muireyecare.com) and has published a number of articles on glaucoma in medical journals.