

## The 7th Conference on Health Care of the Chinese in North America



### Glaucoma in the Chinese – Not the Same as in Caucasians

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#### Abstract

Glaucoma is one of the leading causes of blindness in the United States. However, adult glaucoma presents differently in Chinese than in Whites. Most Caucasians have open angle glaucoma and are detected at a very early stage. Most Chinese, however, have narrow angle glaucoma and present in the later stages. It is important to be aware of these differences and to be cognizant of the differences in the treatment of the two.

To review, adult glaucoma can be broadly classified into open angle and narrow angle glaucoma. In open angle glaucoma, there is a defect in the trabecular meshwork of the eye. This is the drainage mechanism which rings 360 degrees anterior to the iris of the eye in the space called the anterior chamber. In narrow angle glaucoma, however, it is not a defect in the drainage network but rather access to this trabecular meshwork. This access is hindered, usually because of close apposition of the iris to the meshwork making it unaccessible. Simply put, if one thinks of a faucet and drain, in open angle glaucoma, it is the inside of the drain that is clogged. In narrow angle glaucoma, it is access to the drain that is blocked. Narrow angle glaucoma presents either as an acute attack or as a chronic form.

Glaucoma occurs in about 0.5 to 1% of the general population., increasing up to 2% in individuals over 70 years old. These statistics are true for both Caucasians and Chinese. In Caucasians, 80 to 90% of the glaucoma cases are of the open angle type. In Chinese, however, this is reversed, 80 to 90% of patients presenting with glaucoma usually have narrow angle glaucoma of the chronic type. In addition, the Chinese usually present with significant visual defects and alterations of vision. This may be due to a combination of factors, including the lack of adequate medical care, health education and possibly the more severe nature of the disease. Stoicism also comes into play. Chinese patients with acute attacks of narrow angle glaucoma will usually present with a minimum of symptoms after several weeks, versus Caucasian patients who usually experience nausea, vomiting, malaise, severe eye pain and present usually on the first or second day of the attack.

The treatment for open angle glaucoma is usually topical medications. Should topical medications fail, laser treatment is indicated. In narrow angle glaucoma, however, laser treatment has a larger role. It is used both prophylactically as well as concomitantly with eye drops. That is not to say, however, that all Chinese presenting with glaucoma should be treated with laser. Careful examination of the anterior chamber is needed to determine the appropriate treatment protocol.

A prospective study was done on patients at the author's office. The office is located in New York City's Chinatown. Approximately 70% of the patient population is Chinese.

Three hundred fifty nine Chinese glaucoma patients were examined in a two month period from March 1 to April 30, 1994. Of these, 229 or 64% had open angle glaucoma and 130 or 34% had narrow angle glaucoma. The majority of the latter had chronic narrow angle glaucoma. Specifically, 120 or 33% had chronic narrow angle glaucoma and only 10 or 1% had acute narrow angle glaucoma.

A brief mention will be made about phacoemulsification and no stitch technique, the latest technique in cataract surgery. This particular technique has certain advantages and applications in the Chinese. These observations are based on the last 1,000 Chinese patients operated at the author's Center with this technique.

"And the grave is not the goal; Dust thou art, to dust returnest, Was not spoken of the soul."  
-- Henry Wadsworth Longfellow, "A Psalm of Life"