From epidemiological analysis, bilateral blindness in glaucoma will increase to 5.9 million people with open angle glaucoma (OAG) and 5.3 million with angle closure glaucoma (ACG) in 2020. The risk of bilateral blindness could be estimated as three times higher in ACG than in OAG.

Among types of glaucoma, specifically in Asian countries, primary angle closure glaucoma (PACG) is a chief concern as the main cause of blindness. Although “chronic” PACG is a major problem in clinical practice because it worsens insidiously, acute primary angle closure (APAC) will lead to more profound risk of blindness in spite of glaucoma treatment. 

To know which eye has a high risk for APAC is mandatory to be able to select appropriate candidates from the enormous number of angle closures to have preventive treatment, such as laser peripheral iridotomy. This question is still not clearly answered despite numerous studies of angle closure. Guzman et al. performed anterior segment optical coherence tomography (ASOCT) to compare the differences of the newly introduced parameters among primary angle closure suspects (PACS), primary angle closure (PAC), PACG, and APAC. They concluded that APAC showed the narrowest angle, the smallest anterior segment dimensions, the thickest iris, and the largest lens vault (LV) in comparison with PACS, PAC, and PACG.

Logistic regression analysis showed that greater LV ($P < 0.001$), narrower trabecular-iris space area (TISA750) ($P < 0.001$), and thicker iris thickness (IT750) ($P = 0.007$) were the major determinants, and significantly superior to anterior chamber depth of APAC.

This article could contribute to determining which eye has a higher risk of APAC by objective and reproducible parameters of ASOCT, and to prevent blindness from APAC, which has a profound risk of bilateral blindness among primary glaucoma.

References