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Perspective

Frequency and Risk Factors of Diabetic Retinopathy in China

Chuan Li*

Department of ophthalmology, Peking University, Beijing, China

DESCRIPTION

Chinese individuals with diabetes aged 18–74 years underwent the first nationwide cross-sectional survey of diabetic complications between 2018 and 2020 using a multistage sampling method. This study includes 50564 patients having gradable non-mydriatic fundus pictures. The prevalence of both Diabetic Retinopathy (DR) and Vision-Threatening Diabetic Retinopathy (VTDR) was 3.2% (2.9%-3.5%) and 16.3% (95% confidence interval (CI) 15.3%-17.2%), respectively, on a nationwide level. Only a small portion of participants with DR (non-VTDR: 9.4%, VTDR: 32.8%) reported having received a diagnosis of the condition prior to the study. In 31 provinces, there were significant differences in the prevalence of DR and VTDR, with the north having a higher frequency than the south. Hemoglobin A1C showed a greater difference in either DR or VTDR prevalence between those who had achieved a specific metabolic objective and those who had not, compared to blood pressure and low-density lipoprotein cholesterol. The presence and severity of DR were linked to a variety of variables. About one-third of diabetic patients develop Diabetic Retinopathy (DR), a serious specific microvascular consequence of diabetes. About one-third of patients with Proliferative Diabetic Retinopathy (PDR) and high-risk features may develop to severe vision loss within three years if untreated. DR is frequently asymptomatic and causes irreversible vision damage. In many nations, DR is the main factor in the working-age population's preventable vision loss and blindness. DR, on the other hand, was the only one of the top five causes of blindness to have an increased age-standardized prevalence in persons 50 and older globally between 1990 and 2020, and it was anticipated that this trend would continue as more people developed diabetes and lived longer. Blindness and vision loss significantly lower life expectancy, worsen comorbidity risks, and negatively impact patients' quality of life. Fortunately, timely diagnosis and treatment of DR have been demonstrated to be highly beneficial in preventing vision loss and blindness, however this is mostly dependent on current population-based epidemiological statistics regarding DR. However, China, the nation with the greatest and steadily growing number of diabetics, and Asia, where almost half of the world's population with diabetes resides, suffer from a severe shortage of pertinent studies. Previous small-scale regional population-based investigations in China found that local DR prevalence varied greatly depending on the study timeframe, demographic characteristics, and methodology. The epidemiologic characteristics of DR may have changed as a result of major recent changes in aspects connected to DR, such as socioeconomic development, lifestyle, dietary habits, retinal imaging, and treatment. Due to these factors, experts advise the urgent need for ongoing, high-quality population-based studies as well as updated, nationally representative surveys to help China's diabetic patients avert vision loss and blindness. Based on the first national survey of diabetic complications in China between 2018 and 2020, it was sought to investigate the distribution of any DR and Vision-Threatening Diabetic Retinopathy (VTDR) nationwide as well as potentially associated factors by demographics, geographical regions, socio-economic status, lifestyle factors, and clinical characteristics among Chinese adults with diagnosed diabetes. In China, 19.5 million persons with diabetes had some form of DR, and of those, 5% are in the VTDR stage. Patients with VTDR complications had proportions of unilateral and bilateral blindness that were 8.23-fold and 9.72-fold higher than those without VTDR complications. In China, preventing vision loss and blindness is a huge concern due to the high prevalence of diabetes and the ageing population. This study demonstrated the need for multifaceted and targeted interventions to lower the rate of vision loss in diabetes patients, including early and routine DR screening, better metabolic control, educational improvement, lifestyle promotion, increased care for these at-risk populations, and further investigation of geographic causes.

Correspondence to: Chuan Li, Department of ophthalmology, Peking University, Beijing, China, E-mail: Chuanli@gmail.com

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