

Commentary: Profile of sight-threatening diabetic retinopathy and its awareness among patients with diabetes mellitus attending a tertiary care center in Kashmir, India

Diabetic retinopathy (DR), if left untreated, causes irreversible blindness. DR is the leading cause of blindness in the working-age population and it can impact the quality of life of the patients.^[1] Early detection and timely treatment prevent DR-related blindness. Awareness among the patients and health care providers is crucial for the screening and management of DR. Facility of transportation of the patients, health care infrastructure, and trained manpower for the management of DR are important requirements to combat DR-related blindness. In the absence of awareness, facility of transportation, infrastructure, and trained manpower, it is not surprising that the number of patients presenting with DR, rather in an advanced state, will be much higher. Many tier-2 and tier-3 cities of India face these challenges and epidemiological studies on diseases of public health importance like DR should be encouraged in these geographical regions. The article in the current issue of the IJO is the first of its kind study on assessing the awareness of DR among diabetic patients from Kashmir, India.^[2] The authors should be congratulated for conducting this study despite the disturbances erupting

now and then in the Kashmir valley, compounded by the current prevalence of COVID-19 infection. The authors observed a significant association between coexisting systemic hypertension and DR as well as sight-threatening DR (STDR) which emphasizes the additional role of strict control of blood pressure in diabetics, as per the landmark UKPDS study.^[3] Also, the authors found a significant association of DR as well as STDR with other diabetic complications like neuropathy, nephropathy, and coronary artery disease.

However, there are certain aspects where the study would have performed better. First, the authors observed that 60.96% of diabetic patients had DR, and 33.28% had STDR. This statistics is higher in comparison to the prior reports from India.^[4] This current study was conducted in a tertiary eye center with facilities for the management of DR. This may be the reason for the higher proportion of DR cases and STDR cases being referred to this hospital. Second, part of the study was during COVID-19 related lockdown and hence relatively milder forms of DR patients might have chosen to be indoor and not visiting the hospital. This again increases the STDR proportion in the study. Third, the duration of this study encompassed before and after the imposition of the COVID lockdown in Kashmir. The trend of diabetic patients coming to the hospital and hence their recruitment in the study would not have been uniform. Similar epidemiological studies without any restriction on the flow of patients to the health care facilities will give more accurate epidemiological data. Fourth, the duration of follow-up of the patients is less. This results in inadequate data regarding the management and outcomes of the study.

There are many future perspectives of this study. The authors mention that 55.76% (n-116) of patients with STDR mentioned "difficulty in accessing health facilities as the reason for delayed presentation to the hospital." This throws light on the need for screening of DR in the community. In the absence of adequately trained manpower in the forms of vitreo-retina surgeons and optometrists, tele-screening of DR plays an important role. The availability and adaptability of fundus camera-based image capture and grading of the images by the base hospital can screen the patients who need a referral to the base hospital. Smartphone-based image capturing is widely gaining popularity in this regard. Above all, nonmydriatic fundus imaging and offline artificial intelligence-enabled fundus imaging by smartphones are the future promises in the field of screening of DR in remote communities.^[5] Second, there was a lack of explanation of the disease by health practitioners, as per 61.92% (387/625) of respondents. Also, 90% of first-time visitors did not know whether diabetes affected eyes. Of 312 regular patients, 37.82% (n-118) were unaware that diabetes affects eyes, despite at least one visit to the ophthalmologist. These statistics point out the lack of proper communication and counseling on the part of the treating physicians and ophthalmologists. This emphasizes the need for awareness meetings, continuing medical educations (CMEs), and webinars for the physicians, ophthalmologists, and health care persons to make them sensitized about the importance of timely referral of the STDR patients. Third, only 372 (59.52%) patients demonstrated controlled values of HbA1c. This underscores the need for strict HbA1c control in all patients.^[6] Assessment of HbA1c and other systemic parameters should be a part of the management of DR. Fourth, policies related to early detection and referral of DR patients, made both by the government and nongovernment organization bodies, are crucial in the fight against DR.

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References

1. Lee R, Wong TY, Sabanayagam C. Epidemiology of diabetic retinopathy, diabetic macular edema and related vision loss. *Eye Vis (Lond)* 2015;2:17.
2. Kaushik M, Nawaz S, Qureshi TS. Profile of sight-threatening diabetic retinopathy and its awareness among patients with diabetes mellitus attending a tertiary care center in Kashmir, India. *Indian J Ophthalmol* 2021;69:3123-30.
3. King P, Peacock I, Donnelly R. The UK prospective diabetes study (UKPDS): Clinical and therapeutic implications for type 2 diabetes. *Br J Clin Pharmacol* 1999;48:643-8.
4. Gadkari SS, Maskati QB, Nayak BK. Prevalence of diabetic retinopathy in India: The All India ophthalmological society diabetic retinopathy eye screening study 2014. *Indian J Ophthalmol* 2016;64:38-44.
5. Natarajan S, Jain A, Krishnan R, Rogye A, Sivaprasad S. Diagnostic accuracy of community-based diabetic retinopathy screening with an offline artificial intelligence system on a smartphone. *JAMA Ophthalmology* 2019;137:1182-8.
6. Al-Ghamdi AA. Role of HbA1c in management of diabetes mellitus. *Saudi Med J* 2004;25:342-5.

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