

Abstract

Purpose:

Diabetes mellitus (DM) and diabetic retinopathy (DR) contribute to ocular morbidity and are emerging as diseases with significant public health impact. Our aim was to assess the countrywide prevalence of DR and sight-threatening DR (STDR) among persons with diabetes and to evaluate the coverage of DR examinations among them.

Methods:

The present survey was planned to estimate the burden of DR in the population aged ≥ 50 years for assisting in the planning and prioritization of diabetic eye services. For this survey, 21 districts with a high prevalence of DM were selected among the 31 districts where the national blindness and visual impairment survey was conducted. The total sample size was 63,000 people aged 50 years and above. DR was assessed by dilated fundus examination with indirect ophthalmoscope and was graded according to Scottish DR grading. STDR included severe nonproliferative DR, proliferative DR, and clinically significant macular edema.

Results:

The prevalence of diabetes in the surveyed population was 11.8%. Among them, one-third were newly diagnosed DM, that is, diagnosed at the time of the survey. The study revealed that the prevalence of DR among persons with diabetes was 16.9%, the prevalence of STDR was 3.6%, and the prevalence of mild retinopathy was 11.8%. Risk factors for DR in the current study were duration of diabetes (>10 years, OR 4.8, 95% CI: 3.3–6.9), poor glycemic control (≥ 200 mg/dL, OR: 1.5, 95% CI: 1.2–1.7) and insulin treatment (OR: 2.6, 95% CI: 1.7–4.1).

Conclusion:

The current study highlights the substantial burden of DM and DR in India and the critical need to adopt a coordinated and multisectoral approach to reduce their prevalence. There is a need for early identification of persons with diabetes and their routine screening for DR along with availability of treatment facilities.