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Title: Burden of retinopathy and associated risk factors amongst diabetic patients attending rural health facilities, Kancheepuram, India 2013

Abstract

Background: In India, the prevalence of Diabetes and its microvascular complication diabetic retinopathy is increasing. Diabetic retinopathy is one of the main causes for avoidable blindness in the working age group. We investigated the independent associations between the stage of retinopathy and possible risk factors in self-reported diabetic patients attending rural public health facilities in Kancheepuram, India.

Methods: We conducted cross-sectional survey among diabetic patients attending two rural public health facilities using convenient sampling. We did comprehensive eye examination, both by direct and indirect ophthalmoscopy following pupillary dilation and graded retinopathy using standard guidelines. We estimated systemic and ocular risk factors associated with retinopathy. Univariate and stepwise regression analyses were done to identify the independent risk factors associated with the presence and severity of diabetic retinopathy. We calculated adjusted odds ratio with 95% CI.

Results: We surveyed a total of 270 diabetic patients. The mean age of the study population was 54.5 (SD± 10) years and median duration of diabetes was 48 months. The prevalence of diabetic retinopathy was 30%. Factors associated with the presence of diabetic retinopathy were male gender, Family history of diabetes, duration, poor drug adherence, fasting and postprandial blood sugar levels, hypertension and nephropathy. Multivariate analysis of risk factors independently associated after adjustment of age and gender were, hypertension [AOR:3.8;95% CI: 1.8-7.7] , diabetes more than 5 years [AOR:5.3;95% CI: 2.6-10.9], poor drug adherence [AOR:1.8;95% CI: 1.2-3.0], and nephropathy [AOR:2.5;95% CI: 1.1-5.6].

Conclusions: Higher prevalence of diabetic retinopathy and associated risk factors were identified in the study population. We recommend periodic ophthalmic examinations for early detection of retinopathy, with counseling for strict adherence of drug intake, diet control and life style modification in the target population.

Key words: Diabetic retinopathy, Risk factors, cross-sectional study.

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