

Risk factors for diabetic retinopathy in diabetics screened using fundus photography at a primary health care setting in east Malaysia.

ABSTRACT

Introduction: This study reports on the prevalence of diabetic retinopathy (DR) and risk factors among diabetic patients, who underwent fundus photography screening in a primary care setting of Borneo Islands, East Malaysia. We aimed to explore the preliminary data to help in the planning of more effective preventive strategies of DR at the primary health care setting. **Materials and Methods:** A cross-sectional study on 738 known diabetic patients aged 19-82 years was conducted in 2004. Eye examination consists of visual acuity testing followed by fundus photography for DR assessment. The fundus pictures were reviewed by a family physician and an ophthalmologist. Fundus photographs were graded as having no DR, NPDR, PDR and maculopathy. The data of other parameters was retrieved from patient's record. Bi-variate and multivariate analysis was used to elucidate the factors associated with DR. **Results:** Any DR was detected in 23.7% (95% CI=21 to 27%) of the patients and 3.2% had proliferative DR. The risk factors associated with any DR was duration of DM (OR =2.5, CI=1.6 to 3.9 for duration of five to 10 years when compared to <5 years) and lower BMI (OR=1.8, CI=1.1 to 3.0). Moderate visual loss was associated with DR (OR=2.1, CI=1.2 to 3.7). **Conclusions:** This study confirms associations of DR with diabetic duration, body mass index and visual loss. Our data provide preliminary findings to help to improve the screening and preventive strategies of DR at the primary health care setting.

Keyword: Diabetic retinopathy; Epidemiology; Screening; Primary health care, Malaysia.