Prevalence of Diabetic Retinopathy in patients with recently diagnosed Diabetes Mellitus

Lee KMC, Sum WMR

School of Optometry, The Hong Kong Polytechnic University

**Purpose**
The severity of diabetic retinopathy (DR) was well-known to have close association with the duration of diabetes mellitus (DM). However, those patients with short DM duration should not be neglected. In this study we were interested to investigate the prevalence of diabetic retinopathy (DR) in patients with recently diagnosed diabetes mellitus (DM).

**Methods**
A DR screening center was set up in a community in Hong Kong. The screening procedures included history taking, visual acuity measurement, anterior ocular health assessment and retinal examination by fundus photography. Fundus photos were taken at 9 different positions of gaze through natural or dilated pupils. We based on American Optometric Association (AOA) criteria to grade DR severity. ‘Recently diagnosed DM’ was defined as having DM diagnosed by physician within or equal to one year.

**Results**
A total of 11274 patients having the first visit in the centre were recruited from 2006 to 2009. Among them, 3510 patients had DM recently diagnosed. The mean age of those patient was 59.5 years old (standard deviation: 10.9 years) and ranged between 18 to 89 years old. Prevalence of DR was 18% (639 patients) in recently diagnosed diabetic patients. Most of them had mild type of non-proliferative DR. Among the 639 patients, about 6% had developed sight-threatening retinopathy graded as severe or worse, in which further follow-up or treatment might be indicated. Presence of hypertension and smoking did not have significantly association with the prevalence of DR in recently diagnosed diabetic patients.

**Conclusions**
DR screening was important to newly diagnosed diabetic patients. The prevalence of DR was alarmingly high and some of the patients had already developed sight-threatening retinopathy. Most of them will not have any symptoms until the retinopathy gone worse or developed macular edema. A systemic screening programme in the community is needed for early detection and to reduce blindness in diabetic patients.