Service Priorities and Programmes

Electronic Presentations

Convention ID: 947
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Post title: Optometrist, ,

Prevalence of diabetic retinopathy in different age groups in Hong Kong

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Keywords:
prevalence of diabetic retinopathy
age
diabetic retinopathy screening

Introduction

Diabetes Mellitus (DM) is a metabolic disease that occurs due to high glucose levels in the blood. There is an increasing prevalence and earlier onset of DM in Hong Kong. Diabetic retinopathy (DR), caused by complications of DM, can lead to sight-threatening problems. Aside from the duration of DM, diabetic patients who are 50 years of age or older have a higher risk of developing DR.

Objectives

The purpose of this study is to compare the prevalence of diabetic retinopathy in DM patients between different age groups in a community based on a diabetic retinopathy screening program.

Methodology

A diabetic retinopathy screening program was held at The Integrative Community Health Centre at Lai King from 2005 to 2010. Each patient was asked about his/her duration of DM and general health. Each patient was dilated with 1% tropicamide and 9 positions of gaze from each eye were photo-documented and graded according to The Early Treatment Diabetic Retinopathy Study (ETDRS) classification guideline. The eye with more a severe grading was used to calculate prevalence. Patients were categorized into 5 groups according to their ages (18-39, 40-49, 50-64, 65-74 and 75 years or above).

Result

From November 2005 to September 2013, a total of 31832 diabetic patients were screened and 31548 of the total were gradable. The prevalence of diabetic retinopathy was 26.26%, while the majority was graded in the mild non-proliferative DR stage. The 50-64 age group was at highest risk of sight-threatening diabetic retinopathy (STDR) with a prevalence of 0.41%, which also represents 44.6% of the total number of patients that were graded in that category. Patients that were 50 years of age or older were at highest risk of STDR; however, the prevalence lowered to 10% in patients that were 75 years of age or older. Conclusion: The prevalence of diabetic retinopathy is quite comparable to previous studies from different countries. Although duration of DM is one of the well-known key risk factors of DR, STDR was more

prevalent in the middle-age group and therefore, shorter DR screening intervals may be required to reduce the risk of DR. Further investigation in this age group is needed to determine other risk factors of DR.