Service Priorities and Programmes

Electronic Presentations

Convention ID: 225
Submitting author: Dr M L TSANG
Post title: Resident, Tseung Kwan O Hospital, KEC

Impaired fasting glucose (IFG) in hypertensive patients in primary care: should we follow the American Diabetes Association (ADA) or World Health Organization (WHO) diagnostic criteria to further investigate for diabetes mellitus?

Tsang ML(1), Chow KL(1), Luk MHM(1), Wong SN(1), Lai KPL(1), Chan PF(1), Chao DVK(1)
(1)Department of Family Medicine and Primary Health Care, United Christian Hospital and Tseung Kwan O Hospital, Kowloon East Cluster (KEC)

Keywords:
Impaired fasting glucose
diagnostic criteria
diabetes
Chinese hypertensive patients
primary care

Introduction

In 2003, the ADA lowered its threshold of IFG definition from 6.1mmol/l to 5.6mmol/l to optimize the diabetes screening sensitivity. The WHO still recommends the cut-off level at 6.1mmol/l. Locally, there is no consensus guideline regarding whether the new criteria should be adopted. Early detection of diabetes among hypertensive patients is important due to the substantial increase in cardiovascular risk. An evidence-based local definition of IFG will be useful to guide our doctors to better use our resources for diagnosing diabetes. As a result, a local study is conducted to compare the positive predictive values of diabetes at different levels of IFG in hypertensive Chinese patients.

Objectives

To determine how good the ADA's IFG criteria predict diabetes in terms of positive predictive value (PPV) and number needed to screen compared with the WHO's criteria for Chinese hypertensive patients in primary care. The risk factors associated with diabetes were also evaluated.

Methodology

Chinese hypertensive patients from two general outpatient clinics were arranged a standard 75g oral glucose tolerance test (OGTT) if they were screened to have IFG according to the ADA guideline from 1st January 2013 to 30th June 2013. If the

2-hours glucose level was □ 11.1mmol/l, blood tests for OGTT would be repeated together with HbA1c. If the fasting glucose (FG) of the first OGTT was already □ 7mmol/l, then only FG and HbA1c would be performed. Risk factors associated with diabetes were obtained from patients' medical records for analysis

Result

7.2% (45/624) and 14.1% (27/192) patients were diagnosed diabetes in the FG 5.6-6.0mmol/l group and FG 6.1-6.9mmol/l group respectively. The PPV for diagnosis of diabetes according to the ADA and WHO's IFG criteria were 8.8% and 14.1% respectively while the corresponding number needed to screen for diabetes were 13.87 and 7.11.. Increase in age (OR 1.03, 95% CI 1.00-1.05, p=0.046), lower HDL-cholesterol level (OR 0.42, 95% CI 0.20-0.89, p=0.023), being in IFG 6.1-6.9mmol/l group (OR 2.13, 95% CI 1.24-3.66, p=0.006) and on beta-blockers (OR 2.43, 95% CI 1.45-4.06, p=0.001) were found to be statistically significant risk factors for diabetes.