



**Service Priorities and Programmes**  
**Electronic Presentations**

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**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 inve**

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diabetes mellitus

**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 higher cardiovascular risk. An evidence-based local IFG definition will guide doctors to diagnose diabetes more cost-effectively. Therefore, a local study is conducted to compare the positive predictive values (PPV) of diabetes at different levels of IFG in Chinese hypertensive patients.

**Objectives**

1. To assess how many extra diabetic patients would be diagnosed after lowering the cut-off level of IFG to 5.6mmol/l. 2. To identify the characteristics of these patients.

**Methodology**

Chinese hypertensive patients screened with IFG according to the ADA guidelines were arranged for a standard 75g oral glucose tolerance test (OGTT) from 1st January 2013 to 30th June 2013 in two general outpatient clinics. If the 2-hours glucose level was  $\geq 11.1$ mmol/l, OGTT would be repeated together with HbA1c. If the fasting glucose (FG) of the first OGTT was already  $\geq 7$ mmol/l, only FG and HbA1c would be performed. Risk factors associated with diabetes were obtained from patients' medical records and were analysed.

**Result**

7.2% (45/624) and 14.1% (27/192) patients were diagnosed diabetes in the group of FG between 5.6-6.0mmol/l and 6.1-6.9mmol/l respectively. The PPV of diabetes with FG between 6.1-6.9mmol/l was 14.1% while that between 5.6-6.9mmol/l was 8.8%. Among the newly diagnosed diabetic patients in the FG 5.6-6.0mmol/l group, 16 (35.6%) had HbA1c  $\geq 6.5\%$  but only 1 (2.2%) had HbA1c  $\geq 7\%$ . In male patients with FG between 5.6-6.0mmol/l, being on beta-blockers was the only statistically significant risk factor for diabetes (OR 3.303,  $p=??$ ). For female patients, having no exercise (OR 4.55,  $p=0.008$ ) and higher BMI (OR 1.182 for every increase of BMI by

1kg/m<sup>2</sup>, p=0.038) were significant risk factors.