RELATIONSHIP BETWEEN ENDOTHELIAL DYSFUNCTION AND ABNORMAL GLUCOSE TOLERANCE IN PATIENTS WITH CORONARY ARTERY DISEASE AND UNKNOWN DIABETES MELLITUS

ACC Poster Contributions
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Background: Endothelial dysfunction and abnormal glucose tolerance were significant risk factors for cardiovascular events. However, the relationship between endothelial dysfunction and abnormal glucose tolerance in patients with coronary artery disease (CAD) and unknown diabetes mellitus (DM) has not been fully evaluated.

Methods: We enrolled 95 consecutive patients with CAD (37 acute coronary syndrome and 58 stable angina pectoris), normal fasting glucose <110 mg/dl and HbA1c <6.5% who underwent successful percutaneous coronary intervention between March and September 2010. To evaluate the glucose metabolism and endothelial function, 75-g oral glucose tolerance test (75-g OGTT) and flow-mediated dilatation (FMD) of brachial artery were performed. FMD was measured using novel FMD-equipment (UNEXEF18G).

Results: According to the results of 75-g OGTT, we divided these patients into the 3 group: normal (n=25), impaired glucose tolerance (IGT, n=43), and DM (n=27). FMD in DM group was significantly lower than in normal and IGT group (3.8±1.3% vs. 5.0±2.1% vs. 5.2±2.5%, p=0.037). In glucose metabolism, only 2-hour postload glucose level was significantly correlated with FMD (r=0.10, p=0.007).

Conclusion: Endothelial dysfunction is associated with abnormal glucose tolerance, especially 2-hour postload glucose level. It indicates that early diagnose and intervention for abnormal glucose tolerance may improve the endothelial dysfunction in patients with CAD and unknown DM.