

## **INSULIN RESISTANCE AFFECTS CORONARY ARTERY DISEASE IN PATIENTS WITH DIBETES MELLITUS**

Ming-Ting Chou, Chen-Chuan Cheng, Zhieh-Chern Chen, Tseui-Yuen Huang  
Section of Cardiology, Chi-Mei Foundation Hospital , Tainan, Taiwan

**Background:** Diabetes mellitus (DM) is a major risk factor of coronary artery disease (CAD), but the manifestations of CAD among DM patients vary. Insulin resistance (IR) has been documented as an independent factor that may promote atherosclerosis. We then evaluated the relationship of risk factors including IR and CAD in patients with DM.

**Methods:** Patients were divided into three groups: 1) 119 subjects with documented significant CAD by coronary angiography, 2) 49 subjects with nonsignificant CAD, but with positive stress test (thallium scan or treadmill test), 3) 55 subjects with negative stress test. Body mass index, total cholesterol, LDL cholesterol, HDL cholesterol, triglyceride, uric acid were measured. IR was assessed by the homeostasis model (HOMA). Age, gender, hypertension and smoking habits were included for comparison.

**Results:** There were no significant differences in all risk factors between groups 1 and 2. Group 3 also showed no significant difference with group 1 or 2 except for IR. The IR in group 3 is significantly lower than in groups 1 and 2.(group 3 vs group 1:  $4.4 \pm 4.5$  vs.  $7.4 \pm 9.3$ ,  $p < 0.05$ ; group 3 vs group 2:  $4.4 \pm 4.5$  vs.  $7.2 \pm 10.4$ ,  $p < 0.05$ ).

**Conclusion:** In patients with DM, IR not only may promote coronary atherosclerotic stenosis but may also affect coronary microvascular dysfunction..

**Keywords:** insulin resistance, coronary artery disease, diabetes mellitus