

中文題目：第 2 型糖尿病代謝症候群與微血管病變與大血管病變之間的關係

英文題目：Association between Metabolic Syndrome and Micro- and

Macroangiopathies in Type 2 Diabetic Mellitus

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**Background:** The prevalence of metabolic syndrome (MetS) in patients with type 2 diabetes mellitus is high. The aim of this study was to investigate the association between MetS and micro- and macroangiopathies in patients with diabetic, and the associated risk factors.

**Materials and Methods:** We enrolled 1986 (854 men and 1132 women) patients with type 2 diabetes mellitus from outpatient clinics. MetS was defined according to the Adult Treatment Panel III for Asians

**Results:** Of the enrolled patients, 623 had MetS and 1363 did not. The patients with MetS had significantly higher rates of albuminuria (40.8% vs. 21.8%,  $p < 0.001$ ), retinopathy (37.9% vs. 28.6%,  $p < 0.001$ ), coronary artery disease (19.4% vs. 11.6%,  $p < 0.001$ ), cerebrovascular disease (5.8% vs. 3.2%,  $p = 0.014$ ), and an ankle-brachial index  $< 0.9$  or  $\geq 1.3$  (6.1% vs. 3.0%,  $p = 0.015$ ). Moreover, there were significant trends for stepwise increases in albuminuria, retinopathy, coronary artery disease, cerebrovascular disease and peripheral artery disease corresponding to the number of MetS components (all  $p$  for trend  $< 0.05$ ). Risk factors including MetS, old age, sex, wide pulse pressure, increased HbA<sub>1c</sub>, dyslipidemia and decline renal function were associated with micro- and macroangiopathies.

**Conclusions:** MetS and the number of its components were significantly associated with micro- and macroangiopathies in our patients with diabetes, and this resulted in a higher risk of cardiovascular disease. Screening programs to allow for early detection and interventions should be established to lower the risk of cardiovascular disease.

**Key words:** metabolic syndrome; diabetes mellitus; micro- and macroangiopathies