silent stroke on MR and intima-media thickness (IMT) of the common carotid artery on ultrasonography was investigated using multiple logistic analysis. Silent stroke was defined as silent cerebral infarction and cerebral ischemic change, which were defined as a high-intensity signal in the perforating arterial area, and a high-intensity area in the deep white matter or the area surrounding the ventricle, respectively. As risk factors for silent stroke, we analyzed age, SBP (systolic blood pressure), DBP (diastolic blood pressure), ABI (ankle brachial pressure index), PWV (pulse wave velocity) and IMT to investigate silent stroke onset probability.

Results: Silent stroke was found in 54.4% of the diabetic group and 47.6% of the control group. In the diabetic group, SBP, DBP, PWV and IMT were significantly higher in the subjects with silent stroke than those without (141.3 vs. 130.5 mmHg, 79.0 vs. 75.9 mmHg, 1922.5 vs. 1737.6 cm/s and 1.3 vs.1.1 mm, respectively, $p<0.05$). In contrast, there was no significant difference between the subjects with and without silent stroke in the control group. Multiple logistic analysis indicated that the abnormal MR findings were associated significantly with age, SBP and IMT in the subjects with Type 2 diabetes.

Conclusions: IMT, rather than PWV, can be useful for screening silent stroke in Japanese subjects with Type 2 diabetes.

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Cerebrovascular risk in diabetic patients with acute coronary syndrome

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Rationale of the study: To estimate the vulnerability of carotid atherosclerotic plaque in a population of diabetic and nondiabetic patients with a diagnosis of acute coronary syndrome.

Materials and methods: In about 6 months, 105 patients checked-in with diagnosis of acute coronary syndrome and were selected for the study. All the patients during the in-hospital course have been subordinates to Echodoppler of epiaortic vessels. The population was divided in two groups: Group A: 48 patients, all with diabetes; Group B: 57 patients, all nondiabetic.

Results: Among the 105 patients, 88 had positive ultrasonography. In group A (diabetic) 44 (91,7%) patients were positive. The morphologic study of the carotid plaque identified fibrocalcific plaque in 20 (45,5%) patients, fibrolipidic plaque in 13 (29,55%) patients and soft plaque in 11 (25%) patients. Five cerebrovascular accidents had taken place. The ultrasonographic analysis recovered soft plaque in 3 patients, with a quarter shown to have a fibrocalcific plaque, while a fifth had narrowing fibrocalcific plaque. In group B (not diabetic) 44 (77,2%) patients were positive. The morphologic study identified fibrocalcific plaque in 22 (50%) patients, fibrolipidic plaque in 19 (43,2%) patients and soft plaque in 3 (6,8%) patients. During the course of the study, only one patient with soft unstable plaque had an ICTUS.

Conclusions: Soft plaque is more important for short and medium term prognosis. Six patients (6,8%) affected by acute coronary syndrome had a cerebrovascular event. Of these 6 patients, 5 had diabetes, and 4 presented with soft plaque. Epiaortic vessels represent a good window for monitoring the progression of atherosclerotic disease and therefore these vessels need to be investigated.

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Comparative risk factors for early development of macrovascular complications in Korean patients with Type 2 diabetes

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Background: Macrovascular complications in diabetic patients are the leading cause of death and the development of macrovascular complications in Type 2 diabetes is not in proportion to the duration of diabetes alone. However, the prevalence of these complications in Korean patients is poorly understood. We aimed in this study to examine the average duration of diabetes up to the onset of macrovascular complications and clinically important factors of early development of these complications in Korean patients with Type 2 diabetes.

Methods: Duration of diabetes, past medical and social history, demographic and biochemical risk factors in Korean patients with Type 2 diabetes (n=46) without macrovascular complications (n=50) were analyzed. We also compared the risk factors contributing to development of macrovascular complications between early (early onset group, $\leq$ 5 years from onset of diabetes, n=20) and late onset patients (late onset group, $>$ 5 years, n=26).

Results: The average systolic/diastolic blood pressure and percentage of smoking history were higher in the macrovascular complication group than control group (138±22/83±14 vs. 120±18/77±10 mmHg, $p<0.05$). But HbA1C was lower in the complication group (8.5±1.7 vs. 9.5±2.4%). Macrovascular complications developed earlier in male than female patients (57.8±9.5 vs. 67.2±8.5 year's old, $p<0.05$), and more male patients were classified to the early onset group (75% vs. 38%). 84% of male patients had smoking history (female: 5%). Total numbers of microvascular complications in the early onset group were lower than in the late onset group. BMI and LDL-cholesterol were higher in female than male patients (BMI: 24.1±2.7 vs. 26.1±3.8 kg/m^2, p=0.051, LDL-cholesterol: 96.8±38.4 vs. 117.8±33.0 mg/dl, p=0.052).

Conclusions: Our study confirmed that high blood pressure and smoking history are major risk factors for the development of macrovascular complications. Moreover, smoking history in male patients can be a predictive factor for early development of macrovascular complications in Korean Type 2 diabetic patients. We also found that several metabolic factors have different effects in males and females, and these findings would be useful indices to prevent the development of macrovascular complications.

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UKPDS coronary heart disease risk score might be more explanatory for carotid atherosclerosis in newly diagnosed Korean patients with Type 2 diabetes without the metabolic syndrome

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Carotid intima-media thickness (IMT) is a useful surrogate marker of cardiovascular disease and is associated with cardiac events. We investigated the association between carotid IMT and metabolic syndrome (MetS) defined by ATPIII criteria in newly-diagnosed Korean Type 2 diabetes patients. Furthermore, we also studied whether the UKPDS coronary heart disease risk engine (UKPDS-CHD) and Framingham 10-year cardiac risk correlated with carotid IMT.