

Supplementary Materials

Supplementary Results

Factors associated with vascular complications in patients with DM

The type 2 DM patients with vascular complications (n=89) were compared with those with no vascular complications (n=60). The complication-present group had a longer duration of diabetes, higher HbA1c levels, more hypertension, TG concentrations, and lower HDL-C levels. There were no significant differences in age, dyslipidemia, smoking status, BMI, or FRS (Table 1). With respect to the radiologic characteristics, the complication-present group had a greater number of microbleeds ($P=0.010$, 1.8 ± 2.7 vs. 0.3 ± 0.8) and a slightly increased periventricular WMH ($P=0.190$, 4.2 ± 2.1 vs. 3.6 ± 2.0) compared to the complication-absent group. Significant variables on univariate analysis were initially entered into a logistic regression model, and the least significant variables were removed from the model in a stepwise fashion. Table 2 shows the adjusted odds ratio (ORs) of variables for independently associated with vascular complications.

Supplementary Table 1. Demographic and clinical characteristics of study population

Variables	Total (n=149)	Vascular complication		P value
		Absent (n=60)	Present (n=89)	
Age (yr)	65.2±8.4	64.4±8.2	65.7±8.5	0.347
Gender, Male*	86 (57.7)	27 (45.0)	4 (66.3)	0.010
DM duration (yr)*	8.9±6.7	5.8±4.9	11.0±7.0	<0.001
Hypertension*	110 (73.8)	38 (63.3)	72 (80.9)	0.017
Dyslipidemia	48 (32.2)	19 (31.7)	29 (32.6)	0.906
Smoking	15 (10.1)	5 (8.3)	10 (11.2)	0.564
BMI	24.7±2.6	24.5±2.4	24.9±2.7	0.393
Framingham risk score	8.4±3.0	8.2±2.8	8.4±3.2	0.697
WBC count	7146±1890	6781±1623	7372±2015	0.086
HbA1c (%)*	7.0±1.2	6.5±1.2	7.2±1.1	0.001
CRP (mg/dl)	0.3±1.0	0.1±0.2	0.4±1.2	0.216
Fibrinogen (mg/dl)	382±134	419±195	363±90	0.242
Lipid profiles (mg/dl)				
TC	182±38	184±31	180±42	0.620
Triglycerides	153±112	132±68	168±132	0.080
HDL-C*	46±11	49±11	44±10	0.013
LDL-C	105±32	109±31	102±33	0.266
Microalbumin/Creatinine (U)	120±340	40±60	130±360	0.461
White matter hyperintensity				
PV score (range, 0–9)	4.1±1.2	3.6±2.0	4.2±2.1	0.190
SC volume (mm ³)	1.9±2.8	1.5±1.9	2.1±3.2	0.318
Microbleeds on T2* GRE*	1.3±2.3	0.3±0.8	1.8±2.7	0.010
Medication				
OHA and/or insulin	122 (81.8)	53 (88.3)	79 (88.8)	0.935
Anti-platelet agent	117 (79.5)	43 (71.7)	74 (83.1)	0.011
ACE inhibitor	17 (11.4)	3 (5.0)	14 (15.7)	0.064
ARB	54 (36.2)	15 (25.0)	39 (43.8)	0.019
CCB	68 (45.6)	26 (43.3)	42 (47.2)	0.643
Beta-blocker	32 (21.5)	14 (23.3)	18 (20.2)	0.650
Diuretics	30 (20.1)	11 (18.3)	19 (21.3)	0.653
Statin	52 (34.9)	21 (35.0)	31 (34.8)	0.983

MP profiles

CD31⁺/CD42b⁻ EMPs (per μl)^a	2.20 \pm 0.52	2.05 \pm 0.48	2.25 \pm 0.53	0.085
CD31⁺/AV⁺ EMPs (per μl)^a	2.12 \pm 0.57	1.95 \pm 0.54	2.18 \pm 0.57	0.063
CD62E⁺ EMPs (per μl)^a	1.78 \pm 0.42	1.72 \pm 0.47	1.80 \pm 0.41	0.413
Total MPs (per μl)^a	3.69 \pm 0.49	3.61 \pm 0.48	3.72 \pm 0.50	0.321

Values are the means \pm S.D. or percentages. * P <0.05, P values were calculated by the Student's t-test or Pearson's chi-square test. ^aValues after common logarithmic transformation. DM= diabetes mellitus; BMI= body mass index; WBC= white blood cell; CRP= C-reactive protein; TC: total cholesterol; HDL-C= high-density lipoprotein-cholesterol; LDL-C= low-density lipoprotein-cholesterol; PV= periventricular; SC= subcortical; GRE=gradient echo; OHA=oral hypoglycemic agent; ACEI= angiotensin-converting enzyme inhibitor; ARB= angiotensin receptor blocker; CCB= calcium channel blocker; MP= microparticle; EMP= endothelial microparticle; AV= annexin V

Supplementary Table 2. Logistic regression findings based on an analysis of diabetic patients with or without vascular complications

	Vascular complication		
	OR	95% CI	<i>P</i> value
DM duration	1.185	1.030-1.362	0.018
Male gender	1.747	0.379-8.060	0.475
Hypertension	5.148	1.005-26.369	0.049
HbA1c	1.916	0.788-4.659	0.102
HDL-C	0.963	0.899-1.032	0.286
Microbleeds	1.345	0.840-2.154	0.217

DM= diabetes mellitus; HDL-C= high-density lipoprotein-cholesterol; CI= confidence interval