specimen with an extremely low concentration of GAD antibody might not be detected.

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Lack of Association of Factor V Leiden and Coronary Heart Disease in Individuals With and Without Diabetes

Odawara and Yamashita (1) recently reported that there was no association of factor V Leiden with coronary heart disease (CHD) in 60 Japanese patients with type 2 diabetes. Factor V Leiden is a single-point mutation in the coagulation factor V gene associated with resistance to degradation by activated protein C (2). This abnormality of the coagulation system predisposes individuals to the development of a hypercoagulable state. Heterozygosity for this mutation increases risk of venous thrombosis fivefold (3), but its association with arterial thrombosis and diabetes has produced conflicting results (1,4). Patients with diabetes have an increased risk of CHD as evidenced by a 1.5- to threefold increase in CHD mortality (5). This increased risk may result from a high incidence of arterial thrombosis (4) and changes in hemostatic factors (4,5) in these patients. Thus, we investigated the prevalence of factor V Leiden in 200 patients with known CHD undergoing nonemergency coronary artery bypass graft (CABG) surgery at the Medical Center of Delaware, Newark, Delaware. Previous studies done at this institution have shown that 30% of patients undergoing CABG surgery have a diagnosis of diabetes.

After informed consent was obtained, DNA was isolated from the patient's whole blood (collected with other routine preoperative blood studies) and analyzed for factor V Leiden using polymerase chain reaction (2). Demographic and clinical data were extracted by retrospective chart review, and the results of the comparisons of these data for those with (32%) and without diabetes are shown in Table 1. The prevalence of this mutation was 7.4% for those without diabetes and 3.1% for those with diabetes (P = 0.34, Fisher's exact test). The overall prevalence of the point mutation in these patients with CHD (i.e., 6.0%) appears to be no higher than the reported prevalence of this mutation in healthy white Americans (i.e., 5.27%) (6). Although other investigators (4) showed a higher prevalence (i.e., 8.2%) of factor V Leiden in 147 consecutively hospitalized diabetic patients and concluded that this mutation was associated with diabetes, our results do not indicate any higher prevalence of this mutation in diabetic patients with CHD than in CHD patients without diabetes. The lack of an association of factor V Leiden and CHD in this group of American diabetic patients verifies the results found in Japanese diabetic patients (1). We conclude that although the propensity for thrombosis is increased in individuals with diabetes (5), factor V Leiden does not appear to be associated with an increased risk of arterial thrombosis for CHD patients with or without diabetes.

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Table 1—*Characteristics of the study sample*

	Patients with diabetes	Patients without diabetes	*P* value
n	64	136	—
Age (years)	65 ± 10	65 ± 9	NS
Type of diabetes (type 1:type 2)	2:62	—	—
Sex (M/F)	59/41	80/20	<0.01*
Ethnicity			
White American	94	97	NS
African-American	6	2	
Asian-American	—	1	
BMI (kg/m^2)	31 ± 6	28 ± 5	<0.01†
History of myocardial infarction	55	49	NS
History of hypertension	98	92	NS
History of smoking	67	69	NS
Family history of vascular disease	83	73	NS

Data are means ± SD or %. *$P < 0.01$ by χ^2 test; †$P < 0.01$ by Wilcoxon's rank-sum test.