Diabetic patients are more prone to develop atherosclerosis and its complications than non diabetics. This is demonstrated by several clinico-pathological and epidemiological observations (1-3). One of the most accurate of these is the Framingham study which clearly demonstrates that the average annual incidence of vascular disease is higher in diabetics at all age groups, in both sexes and in all main arterial districts (4).

Although diabetes is often associated with atherosclerosis, the mechanism of this association is still unclear. The question is whether any other factor beside hyperglycemia can be responsible for the increased risk of atherosclerosis in diabetes. A recent survey in diabetic patients from various countries on the prevalence of ecg abnormalities related to coronary atherosclerosis (Q waves and ST/T changes) can answer the question (5). The variation in the frequency of these abnormalities between different population groups is very large (fig. 1): about 3 times higher for USA versus Japanese men and USSR women versus Polish ones. As the degree of hyperglycemia was comparable in all the groups under study, the possible association of other factors such as hypercholesterolemia, hypertension, thrombophilia, etc. might explain the variable frequency of atherosclerotic complications in diabetic patients in various parts of the world (5). In this regard many authors have tried to define the role of the classical risk factors in the development of atherosclerotic complications in diabetic patients (4, 6, 7).

In the Framingham study (4) the possible influence of hypercholesterolemia, arterial hypertension, cigarette smoking on CHD incidence was evaluated in both sexes in diabetics with both uni-
Fig. 1: Frequency distribution of ECG abnormality rates adjusted for age (ref. 5).

Variate and multivariate analysis. A significant association was found in men between CHD incidence and a low serum level of HDL cholesterol, a high serum level of LDL cholesterol and a high systolic blood pressure. The presence of diabetes in men, independently from other risk factors, did not influence the incidence of coronary events. In women, on the contrary, diabetes resulted an important additional risk factor for CHD.

That the level of blood glucose has little or no influence on atherogenesis is not unanimously believed. From the Whitehall study (7), in fact, a threshold level of blood glucose (200 mg/dl) has been identified above which the incidence rate of CHD is almost doubled without any further increase of morbidity and mortality by increasing the values of blood glucose.

Atherosclerosis of the lower limbs is also very frequent in diabetic patients (4) but in general the level of blood glucose and the duration of diabetes is not correlated with its incidence rate as is instead the value of systolic blood pressure and of total serum cholesterol. Only for distal localization of arterial