A SCREENING OF MALFORMATIONS IN TWINS

G. DEL PORTO, M.L. TOMBOLINI

Department of Medical Genetics, University School of Medicine, L'Aquila, Italy
The Gregor Mendel Institute of Medical Genetics and Twin Research, Rome, Italy

The hereditary conditioning of various malformations of the skeletal and the male genital systems has been determined through a twin study based on a sample defined with respect to zygosity and concordance. An interzygotic analysis was carried out and the inheritance coefficient determined.

Prof. G. Del Porto, Cattedra di Genetica Medica, Università dell'Aquila, Italy

ISCHEMIC HEART DISEASE IN DEATH DISCORDANT TWINS

A Study on 205 Male and Female Pairs with Special Reference to Hereditary Factors

ULF DE FAIRE

Serafimer Hospital, Stockholm, Sweden

Results are presented from a study on ischemic heart disease (IHD) in death discordant twin pairs, 46-70 years old, deriving from the Swedish Twin Registry. The main object of the investigation was to evaluate the genetic influence in IHD by examining the surviving cotwins with regard to clinical and subclinical signs of IHD as well as risk factors for IHD and correlate the findings to the cause of death of the partner (IHD-not IHD).

The material consists of 205 male and female twin pairs, who became death discordant during the period 1971-1973, i.e., one of the members in an unbroken pair died during this period. The surviving cotwins were then examined on average 5 months after the death of the partner.

The results showed significantly more clinical and subclinical signs of IHD among the surviving cotwins whose partners had died from IHD compared to those whose partners died from other causes than IHD. This difference was especially pronounced when MZ twins were compared.

Most of the biometric risk factors measured (anthropometric variables, blood pressure, lipids, uric acid) showed only slightly higher values for the cotwins whose partners died from IHD compared to those whose partners died from other causes.

It can be concluded that the results indicate a substantial genetic influence in the development of IHD and, furthermore, that the genetic influence seems to be transmitted not only through some of the risk factors measured but also through factors which are still unknown.

Ulf de Faire, M.D., Serafimerlasarettet, Box 12700, 11283 Stockholm, Sweden

CORONARY HEART DISEASE IN MALE TWINS

Seven-Year Follow-up of Discordant Pairs

INGVAR LILJEFORS

St Görans Hospital, Stockholm, Sweden

In an investigation in 1967 of about 100 male twin pairs collected from the Swedish Twin Register, discordance with respect to the presence of CHD was found in 37 pairs of which 19 were MZ. The investigation included physical examination, cholesterol measurements, and an interview regarding, among other things, smoking habits.

In a follow-up study in 1974 — seven years after the original investigation — all but one of the 37 twins regarded in 1967 as free from overt CHD could be traced. Ten of the 36 twins had developed symptoms of overt CHD (angina pectoris or infarction); 18 twins were still healthy, 2 had died from other causes, and 6 had questionable complaints of chest pains.

In a comparison of the two groups of twins with and without symptoms of overt CHD, no differences were found with respect to blood pressure, serum cholesterol, or smok-