PSYCHOLOGICAL RISK FACTORS IN CARDIOVASCULAR DISEASES

ABSTRACT. Recent research has shown that psychological risk factors play an important role in the pathogenesis of cardiovascular diseases. The so-called 'coronary prone behaviour pattern' predominates, an important part of which is the 'Type A behaviour pattern'. This is characterized by a marked ambition, a constant feeling of being under pressure, due to latent aggression and to a striving to dominate. For cerebrovascular diseases the so-called 'pressured pattern' as a risk factor has been found to be typical which is comparable to the Type A behaviour. Psychological risk factors and their components are not equally important for different vascular diseases. Besides the explanation of the question as to how far psychological processes really are involved in the development of vascular diseases, the research on psychological risk factors serves as a foundation for psychosomatic theories.

Key words: Coronary prone behaviour, Type A behaviour, Pressured pattern in stroke patients.

1. INTRODUCTION

Whether the psyche has something to do with vascular diseases has been discussed over a long period. Only in the last 20 to 30 years research on this question has been seriously developed. Recently an ever increasing amount of results allows to answer questions regarding the relationship between psychological factors and vascular diseases more precisely.

In the chronic degenerative vascular diseases both cardiovascular and cerebrovascular localization must be discussed with respect to psychological risk factors. Both are epidemiologically relevant groups of diseases: Heart disease is the most frequent cause of death in Europe. Second comes cancer and third cerebral stroke (Junge and Hoffmeister, 1982). In various prospective long-term studies on coronary heart disease it has been found that the incidence of new diseases per year in 100,000 inhabitants differs by a factor of thirteen between the lowest (Crete) and the highest rate (North Karelia in Finland). The myocardial infarction register of the WHO shows a relation of incidence of 1 to 4 in man and 1 to 8 in women between Sophia and Helsinki (Lamm and Schettler, 1984).

2. THE MULTIFACTORIAL RISK FACTOR CONCEPT

What is the cause of these differences between populations? The factors
heredity, environment and behaviour will be discussed. So-called migrant studies have shown that migrants (such as Japanese who emigrated to the USA, Jemenites who moved to Israel, or Maoris who settled in New Zealand) who move from areas with a low incidence of coronary heart disease to countries with a higher occurrence soon have the higher occurrence of heart diseases of their new homeland. This increase incidence is apparently connected with the loss of traditional lifestyles of the original homeland. In Italian families who have lived many years in the U.S.A., but whose traditions, including food, have been strictly maintained, the occurrence of coronary heart disease is still far below the level of those Italians who have adapted fast to the North American lifestyle. Japanese have a death rate of about 130 from heart disease per year and per 100,000 inhabitants in Japan. This value increased to 220 in Japanese who moved to Hawaii (Honolulu) and reached 370 in those who have lived for a considerable time in California (San Francisco). This emphasizes that social differences, behavioural differences and differences in eating habits are responsible for the magnitude of risk (Lamm and Schettler, 1984).

More and more factors have been identified which are in a statistical meaning connected with the development of cardiovascular diseases. The assumption of an interaction between these factors led to the development of the so-called “risk factor concept” (Langosch, 1984). When using the expression ‘risk factor’, this indicates that it is not possible to say ‘because he (she) has this (these) risk factor(s), this disease will develop’ but ‘on the basis of the risk factors present (occurrence, severity, calculated duration), one can consider a certain probability that a disease connected with these risk factors can occur’.

Cardiovascular diseases, like most of the chronic degenerative diseases, have a multi-causal etiology. Strasser (Lamm and Schettler 1984) working for the WHO found 70 factors which have been proven to be risk factors. Only 6 of these factors did he consider to be of primary importance and influence, namely blood lipids, blood pressure, cigarette smoking, diabetes mellitus, oral contraceptives and physical inactivity. In the list of additional contributing risk factors Strasser included age, sex, heredity and personality.

This multifactorial risk theory permits to make complex predictions. It has been shown that one cannot correctly predict more than about 50—60% coronary diseases, even when 7 or 17 or even more known risk factors are considered in the prediction. Therefore it is likely that additional risk factors have to be considered. Particularly, the psychological factors such as personality, stress, family and work situations or