

Introduction and Aim of Work

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There is a general impression that the incidence of ischaemic heart disease is particularly high amongst professional men and is related to the stress of modern urban life. It is by no means clear what factors are responsible for the higher incidence of ischaemic heart disease in certain occupations and social classes: the degree of mental stress and strain or other psychological factor, the type of diet or standard of nutrition, and the amount of day-to-day physical inactivity have been suspected, but as yet there is little convincing evidence favouring one more than another (Wood, 1961).

Polymorphonuclear leucocytes (PNLs) are known to accumulate in infarcted human myocardium 12-24 hours after a permanent coronary occlusion, their presence peaks around 3-4 days and declines after the first week (Mallory et al., 1989).

It has been suggested that white blood cells, and neutrophilic granulocytes in particular, are major mediators of myocardial injury induced by ischaemia (Lucchesi and Mullane, 1986). When they are activated in the microcirculation, these cells cause extensive tissue damage, for example by releasing oxygen free radicals and lysosomal enzymes (Ernst et al., 1987). Although neutrophil

activation has been shown to correlate with the severity of ischaemic heart disease. In humans, in one study (Berliner et al., 1986), very little is known about the functional characteristics of neutrophils in patients with ischaemic heart disease.

The aim of this work was to study the phagocytic activity of neutrophils early in acute myocardial infarction, when the stress of the attack is added to the stress as a predisposing factor.