Summary of Three Reports

1 THROMBOLYTIC THERAPY IN ACUTE MYOCARDIAL INFARCTION: CONTROLLED CLINICAL TRIAL WITH STREPTOKINASE IN CORONARY CARE UNITS

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2 STREPTOKINASE IN RECENT MYOCARDIAL INFARCTION: A CONTROLLED MULTICENTRE TRIAL

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3 THROMBOLYTIC THERAPY IN ACUTE MYOCARDIAL INFARCTION

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The results of three multicentre trials of the use of streptokinase in acute myocardial infarction were reported. These trials have been published elsewhere (Schumtzler, Fritze, Gebauer, Gillmann, Heckner, Körtge, Van de Loo, Pezold, Poliwoda, Praetorius, and Zekorn, 1971: European Working Party, 1971: Dioguardi, Mannucci, Lotto, Rossi, Levi, Lomant, Rota, Mattei, Proto, Fiorellii, and Agostini, 1971) and therefore only the salient points are summarized.

Mortality during a period of 40 to 42 days following acute myocardial infarction was used as the major index of therapeutic effectiveness in each of the trials. Patients were admitted to the trials on clinical grounds before being allocated, in a random fashion, to a treatment or a control group.

Some details of patient selection and treatment are shown in Table I. Streptokinase and heparin (where used) were given in standard dosage and anticoagulation with oral agents was continued in all groups.

The numbers of patients treated and the mortality during the follow-up period are summarized in Table II. It can be seen that mortality was significantly reduced by streptokinase treatment in the German/Swiss and European working party trials. This advantage was not demonstrated by the Italian trial. The discrepancy may be due to the low overall mortality in this latter trial associated with management in coronary care units and with the age limit of 70 years being set for entry into the trial.

The German/Swiss authors noted a lower mortality in patients with shock, arrhythmias, and heart failure treated with streptokinase. Likewise the European working party recorded a reduction in mortality due to heart failure and also the number of reinfarctions in those patients treated with streptokinase. The Italian trial showed no such differences between control and treated groups.

Bleeding, usually minor, was a more frequent complication in the streptokinase-treated groups and the European working party reported a higher incidence of fever in streptokinase-treated patients.

Thus two randomized, multicentre trials demonstrated a favourable effect of streptokinase in treating patients with acute myocardial infarction whilst a third trial failed to demonstrate this effect.

Trial	*Maximum Duration of Symptoms to Allow Inclusion (hr)*	*Age Limit (years)*	*Control Treatment*	*Dosage of Streptokinase*	*Duration of Treatment (hr)*	*Ward*
Italian[1]	12	70	Heparin	250 000 u 150 000 u/hr	12	CCU
European Working Party[2]	24	Nil	Heparin	250 000 u 100 000 u/hr	24	General and CCU
German/Swiss[3]	12	Nil	5% fructose	250 000 u 130 000 u/hr	18	General and CCU

Table I *Details of selection and treatment of patients in three multicentre trials of streptokinase in acute myocardial infarction*

[1]Dioguardi *et al* [2]Verstraete *et al* [3]Poliwoda *et al*

Trial	*Number of Patients Analysed*			*Mortality*	
	Total	*Streptokinase Group*	*Control Group*	*Streptokinase Group*	*Control Group*
Italian	321	164	157	19 (11·6%) NS	18 (11·5%)
European working party	730	373	357	69 (18·5%) $P = 0{\cdot}014$	94 (26·3%)
German/ Swiss	269	138	131	20 (14·5%) $0{\cdot}03 > P > 0{\cdot}02$	34 (26%)

Table II *Number of patients analysed and mortality over the 40-42 day follow-up period in three multicentre trials of streptokinase in acute myocardial infarction*