AORTIC VALVE REPLACEMENT IN A PATIENT WITH SEVERE HEMOPHILIA B. M.L. Ehrman, M. O'Donnell, B.A. Cooper. McGill University, Royal Victoria Hospital, Montreal, Quebec

Thrombotic effects of prothrombin complexes are well known; successful valvular surgery with its attendant dangers of clot formation on synthetic surfaces have not been reported in patients with severe hemophilia B. The appearance of Connaught Factor IX Complex, prepared by ion exchange resin, with non-detectable levels of Factor IXa and Xa seemed to minimize this hazard. A 30 year old male with severe Factor IX deficiency (.5 to 2%) had progressive cardiac failure, secondary to aortic insufficiency, which necessitated valve replacement. A trial infusion of Factor IX Complex did not alter platelets, fibrinogen, thrombin time, or Factor V & VIII levels, but did raise Factors II & VII to 640% and 215% respectively. The $T_1/2$ for Factor IX was calculated to be 13.5 hours in this patient. Aortic valve replacement was complicated by significant clot formation on the afferent loop of the pump oxygenator, despite adequate heparin levels. 72 hours post-operatively, disseminated intravascular coagulation developed in a setting devoid of classical stimuli; this was easily reversed by increasing heparin infusion to full therapeutic levels. Heparin was adminixed with all further infusions and no further thrombotic episodes occurred in his hospital course. 3 months later the patient has returned to full activity on no replacement therapy. This case demonstrates that while ion exchange preparations like those used in Britain have substantially less risk of coagulopathy than salt eluates, they do create a potentially hypercoagulable state.

COMPARISON OF RISK FACTORS IN PATIENTS WITH NORMAL ARTERIES AND CORONARY DISEASE AFTER INFARCTION. S. K. Durrain, A. H. Khan and L. J. Haywood. Department of Medicine, Los Angeles, County--University of Southern California Medical Center, Los Angeles, California, U.S.A.

Risk factors were compared in 42 patients (pts) with coronary artery disease (CAD) and 18 with radiographically patent arteries (RPA) on angiography performed three weeks to six months after documented myocardial infarction (MI). All pts had typical clinical and laboratory findings during the acute attack. All pts were below age 50 and both groups had a similar distribution of racial background (Caucasian, black and Mexican-American). Psychiatric problems were not more frequent in either group. The data demonstrated a high prevalence of standard risk factors in the CAD group for hypertension (28 of 42 = 67%), hypercholesterolemia (25 of 42 = 60%) and smoking (17 of 42 = 41%), and similarly high prevalence of smoking (16 of 18 = 89%), heavy labor (12 of 18 = 67%) and obesity (9 of 18 = 50%) in the RPA group. Factors significantly more common in the CAD group as compared to the RPA group by the Chi Square test were: Hypertension ($P < 0.001$), hypercholesterolemia ($P < 0.001$), diabetes ($P < 0.001$), and family history ($P < 0.05$). Factors more common in the RPA group were heavy alcohol consumption ($P < 0.001$), smoking ($P < 0.05$), heavy laborer occupation ($P < 0.001$) and obesity ($P < 0.001$). The data suggest that risk factor screening would identify individuals at risk from coronary artery disease but would be unreliable in identifying individuals at risk for MI with RPA. Further study is indicated to determine what factors operate to produce ischemia and infarction in the RPA group of pts.

TREATMENT OF VENOUS THROMBOSIS WITH STREPTOKINASE: REVIEW OF U.S. CLINICAL STUDIES. J.W. Maloy, D.J. Mehta, I.J.E. Boksay. Hoechst-Roussel Pharmaceuticals Inc., Somerville, New Jersey, U.S.A.

Treatment of venous thrombosis with streptokinase followed by anticoagulants was compared to treatment with anticoagulants alone. The study was performed by several investigators following a common protocol. Results of venographic examinations before and after treatment were compared by radiologists unaware of the treatment assigned to provide the primary comparison of efficacy. Streptokinase therapy was found to be significantly ($p < .05$) superior to anticoagulants alone in achieving clearance of occluded veins. Approximately 60% of patients treated with streptokinase experienced significant clearance of venous thrombi compared to only 18% of control patients. The incidences of complete clearance of thrombi was 22% in patients treated with streptokinase compared to 5% in patients treated only with anticoagulants. The incidence of severe spontaneous (unrelated to invasive procedures) bleeding occurred at a similar incidence rate in both groups of patients. Bleeding at invasive sites, low-grade fever, and mild allergic manifestations (e.g. headache, nausea, itching, etc.) occurred more often in patients treated with streptokinase but rarely interfered with the treatment procedure. The significantly increased benefit achieved with streptokinase followed by anticoagulants was concluded to outweigh the risk of minor complications and the relatively low risk of severe complications.