

ROLE OF STREPTOKINASE IN TREATMENT OF VENOUS THROMBOSIS. A.V. Persson, C.E. Foti, L.E. Pierce, and N.D. Sower. Lahey Clinic Foundation, Boston, MA, Metairie, LA, Washington, DC, and Boise, ID, U.S.A.

Fifty-four patients with deep venous thrombosis diagnosed on the basis of venographic studies were treated by four physicians using the same protocol but acting independently. In the early part of the study all patients were treated with streptokinase; in the latter part patients were randomized and treatment was either heparin or streptokinase. Of 40 patients who received streptokinase, 22 were randomized and 18 were nonrandomized. Both drugs were administered by continuous IV infusion for 72 hours. Patients treated with streptokinase in the early stages of disease did very well; 90% of patients treated within five days of the onset of clinical symptoms and 75% treated within two weeks of onset showed marked improvement on post-treatment venograms. Only one patient who was treated with heparin showed a good result. Clinical results were similar in both groups. The incidence of important complications, such as significant bleeding and pulmonary emboli, was the same with both modalities. Fever of more than 101°F developed in about 50% of patients treated with streptokinase but in only one patient treated with heparin. We conclude that streptokinase is very effective in treating patients with acute deep venous thrombosis.

PLASMINOGEN ACTIVATOR RELEASE AFTER VENOUS OCCLUSION AND INFUSION OF DDAVP. M. Åberg and I.M. Nilsson. University of Lund, Coagulation Laboratory and Department of Plastic Surgery, Allmänna Sjukhuset, Malmö, Sweden.

Defective release of fibrinolytic activator from the vessel walls implies an increased risk of thromboembolic disease (Isacson and Nilsson 1972). Therefore methods suitable for determination of the fibrinolytic "capacity" in man have become increasingly interesting. The fibrinolytic activity (FA) in blood after infusion of DDAVP (1-desamino-8-D-argininvasopressin) was determined in 21 normals and 42 patients with recurrent venous thrombosis. The results were compared with those found after venous occlusion (VO) in the same subjects. DDAVP induced a significant but lower increase of the fibrinolytic activity in blood than VO. The correlation was good between the FA immediately after DDAVP and VO both in normals ($r = 0.53$) and in patients ($r = 0.63$). Both DDAVP and VO induced a significantly lower FA in patients than in normals. All subjects studied showed an increase of the FA with both methods used. Both DDAVP and VO induced a significant increase of VIII:C and VIIIIR:AG. This increase was about the same in the two groups. No side effects were found after infusion of DDAVP which thus seems to be suitable for determination of the fibrinolytic "capacity" in patients with thromboembolic disease.

Isacson, S. and Nilsson, I.M. 1972. *Acta chir. scand.* **138**, 313.

PLATELET ADP-HYPERSENSITIVITY BY AGING AND ISOMETRIC EXERCISE IN DIABETICS AND ITS PREVENTION BY EG-626. T.Sano, T.Motomiya, Y.Itoh, N.Mashimo, H.Yamazaki and T.Shimamoto. Aoyama Tokyo Metropolitan Hospital, Tokyo Metropolitan Institute of Medical Science, Tokyo Medical and Dental University and Japan Arteriosclerosis Research Institute, Tokyo, Japan.

The important role of platelet aggregation in the pathophysiology of diabetic vascular disease has been emphasized. The authors devised a new method to assess platelet sensitivity to aggregation performed without centrifugation (Sano et al. *Thrombos. Haemostasis* April '77 issue, in press). Using this technique, platelet aggregability in diabetics was assessed concerning to age and to the effect of isometric exercise. The effect of EG-626, a potent cAMP phosphodiesterase inhibiting and thromboxane A₂-antagonistic substance, administered prior to exercise was also observed.

In 52 diabetics without macroangiopathy, platelet sensitivity to ADP-aggregation was assessed. The sensitivity was expressed by 'n' of the minimum effective concentration of serially two-fold diluted ADP, 2^{-n} mg/ml, to give aggregation. In males, both diabetics and healthy, the sensitivity correlated significantly with age. The regression lines obtained were $Y=2.15+0.13X$ (Y: sensitivity, X: age in years) in the diabetics and $Y=6.58+0.04X$ in the healthy subjects respectively. The value of the slope was significantly higher in the diabetics comparing to the healthy subjects. An enhancement of the platelet sensitivity was disclosed significantly in the diabetics but not in the healthy subjects, after isometric handgrip exercise at 50% maximal voluntary contraction for 2 minutes. This enhancement was prevented when the patients were treated orally with 300 mg of EG-626, 1.5 hours before exercise. These findings would suggest the thrombotic tendency in diabetics and anti-thrombotic effect of this compound.