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THROMBOLYTIC THERAPY WITH PURINE PLASMIN: BIOCHEMICAL AND CLINICAL RESULTS. F. Asbeck and J. van de Loo. Medizinische Universitätsklinik, Münster, West Germany.

Preliminary results are presented on the systemic action of porcine plasmin which was used as a thrombolytic agent. Patients suffering from acute arterial thromboembolism (2) or deep venous thrombosis (4) received porcine plasmin (pp) in the following dose schedule: 2000 U given as an initial dose, 1000 U given at first 60 minutes, and 2000 U given as a maintenance dose by continuous infusion within the following 8 hours. The maintenance dose was repeated at each of the 2, 3, or 4 consecutive days.

Investigations of the plasmas showed a rapid drop of fibrinogen to 50% of the initial value. PTT raised up to 300 sec/ml. There was no change of the mean plasminogen concentration. Systemic fibrinolytic activity was very low and could only be demonstrated in traces during all stages of the therapy. Analysis of the inhibitors showed a continuous drop of the alpha-macroglobulin to levels of 50-100 mg/dl. Plasmin-antiplasmin complexes were detected in considerable amounts.

The treatment was well tolerated by all patients. In one patient, complete recanalization of a femoral bypass of an iliac artery could be achieved. In the other patients, only partial recanalizations could be demonstrated. A combination of porcine plasmin with streptokinase therapy is possible.

FIBRINOLYTIC SYSTEM AND FIBRINOLYTIC INHIBITORS IN BECHET’S DISEASE. F. Asbeck, U. Meyer-Rehknecke, and J. van de Loo. Medizinische Universitätsklinik, Münster, West Germany.

An increase of the inhibitory potential seems to be the generally accepted cause for the suppression of the fibrinolytic system in Behçet’s disease. To prove this theory, we investigated 5 male patients (31-46 yrs.) suffering from severe Behçet’s syndrome. Additionally, three of them were treated with Stanozolol (5 mg/d) and Phenformin (100 mg/d) during a period of one year. The following parameters were investigated in detail: Fibrinogen, plasmin (different fibrin plate assays), plasminogen, fast reacting antiplasmin, plasmin-antiplasmin complex, alpha-macroglobulin, C3-esterase inhibitor, alpha-antithrombin, and antithrombin III (Different immunological methods).

In all patients, the concentration of fibrinogen and alpha-antithrombin were elevated. There were normal concentrations of plasminogen, fast reacting antiplasmin, plasmin-antiplasmin complex, alpha-macroglobulin, C3-esterase inhibitor, and antithrombin III. Using the venous occlusion technique, a marked reduction of the in-vivo activation of the fibrinolytic system could be demonstrated. During therapy with Stanozolol and Phenformin, a high fibrinolytic response was induced by venous occlusion. The analysis of the different inhibitors, however, did not explain this phenomenon. An increased production or release of vessel activator(s), therefore, seems to be the mechanism of fibrinolysis induction by anabolic steroids and Phenformin.