

PLATELET SURVIVAL AND ANTIPLATELET DRUGS IN DIABETES MELLITUS DISEASE. G. Bremer and E. Jacobi. Second Department of Internal Medicine, Medical School, University of D-4000, Düsseldorf, West Germany.

Platelet survival and platelet adhesiveness was measured in patients with long time diabetes mellitus in need of insulin. They are characterized by the complications of diabetic gangrene, neuropathy, nephropathy and retinopathy. Compared to a control group of healthy persons, patients with diabetes show a significant decrease in platelet survival (normal persons $t/2 = 4.1$; diabetics $t/2 = 3.24$). SH 1117, a dipyridamole derivative, alone in doses of 500 mg three times per day, has little modifying effect on platelet consumption. By the application of a combination of 75 mg dipyridamole and 330 mg acetylsalicylic acid, a normalization of platelet survival and platelet adhesiveness is achieved.

FIBRINOGEN HETEROGENEITY, FIBRINOLYSIS AND BLOOD COAGULATION IN BURNED PATIENTS. B. Lipinski, S.K. Szyfelbein, I. Lipinska, V. Gurewich and J.F. Burke. Vascular Laboratory, St. Elizabeth's Hospital and Shriners Burns Institute. Boston, Massachusetts U.S.A.

The aim of this study was to investigate with recently developed methods the blood coagulation and fibrinolytic abnormalities frequently seen in major thermal injury. Total fibrinogen (F), its high molecular weight (HMW) and lower molecular weight (LMW) fractions evaluated by means of 3.5% SDS-polyacrylamide gel electrophoresis, fibrin monomer (FM) in plasma, serum fibrin degradation products (FDP), fibrinolytic activity (FA) in euglobulins, thrombin time (TT), PT and PTT were determined on 24 occasions 3-35 days after burn and immediately pre- and post-primary incisions of burn eschar. It was found that the content of HMW-F, its proportion to LMW-F and to the total plasma proteins was significantly increased in all patients, suggesting accelerated F synthesis. The high concentration of HMW-F may contribute to the increased blood viscosity observed in burned patients. The content of plasma HMW-F in these patients did not correlate with decreased FA nor elevated serum FDP. FM was detected in only 2 instances. A significant prolongation of TT was observed in 22 out of 24 occasions (mean 25"/15") and was found not to correlate with FDP levels. The TT was corrected by higher concentrations of thrombin, the addition of 0.015 M CaCl_2 but not MgCl_2 and mixing (1:1) with normal plasma. PT and PTT were within the normal range in all patients. These patients showed clinical evidence of defective hemostasis which appeared to correlate with the TT. It is concluded that significant intravascular coagulation did not occur in the burned patients and that the TT prolongation is probably due to the presence of an as yet unidentified abnormality in plasma interfering with fibrin polymerization.

IN VIVO AND IN VITRO COMPARISON OF VARIOUS FACTOR VIII CONCENTRATES. I.M. Nilsson and U. Hedner. University of Lund, Allmänna Sjukhuset, Malmö, Sweden.

Five different factor VIII concentrates, AHF-Kabi (=fraction I-0), Krynativ-Kabi (=cryoprecipitate), Hemofil-Hyland, AHF-Profilate-Abbott, Kryobulin-Immuno, available in Sweden for treatment of haemophiliacs were compared with respect to in vivo recovery of F VIII:C and survival time and in vitro properties. The parameters studied were F VIII:C, F VIIIR:AG, crossed immunoelectrophoresis, F VIII:Rcof, fibrinogen content and F XIII activity. All the preparations had higher values for F VIIIR:AG than for F VIII:C. The quotient was highest for Hemofil, Krynativ-Kabi and Kryobulin and varied between 4 and 7. The lowest quotient, 1.3 to 4, showed AHF-Kabi. The units of F VIII:Rcof were almost the same as the units of F VIII:C. AHF-Kabi had the highest fibrinogen content and was the only preparation with high amounts of F XIII. In cross immunoelectrophoresis AHF-Kabi showed a similar pattern to that of normal plasma. The other preparation had a different pattern suggesting less heterogeneity of the molecule. The in vivo recovery was about the same for all the concentrates but AHF-Kabi had a significantly longer half-life (18-26 hrs); the corresponding figures for Hemofil were 8-16 hrs when given to the same patients. Only AHF-Kabi was able to completely normalize the defect in von Willebrand's disease.