

STUDIES ON THE DEGRADATION OF HUMAN FIBRINOGEN BY THE ACTION OF "CATERPILLIN". C. L. Arocha-Piñango and J. Perales. IVIC, Caracas, Venezuela.

Degradation products of human fibrinogen formed by the action of "Caterpillin" (a proteolytic substance from the hemolymph of a saturnid moth caterpillar) was studied by immuno-electrophoresis and polyacrilamide gel electrophoresis. The pattern of X, Y, D and E degradation products differ from those formed by the action of plasmin and trypsin. Chain characterization during the degradation process indicated a very rapid loss of the α chain.

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SIGNIFICANCE OF FIBRINOGEN/FIBRIN DEGRADATION PRODUCTS(FDP) AFTER CARDIOVASCULAR SURGERY. R. Altman, A. Zielinsky, J. Rouvier and R. G. Favaloro, Departamento de Cirugía Cardiovascular, Sanatorio Güemes, Buenos Aires, Argentina.

The frequent appearance of FDP during the postoperative of cardiovascular surgery using extracorporeal circulation, induced us to determine its diagnostic value. 17 patients were studied. Fibrinolytic activity was determined using the staphylococcal clumping test (SCT) and the latex plasmin-antiplasmin immunoassay (LPA). Normal value of LPA in plasma previously studied in 15 normal patients was negative to positive up to a dilution of 1/4. Normal value of SCT in our laboratory (in 200 normal patients studied) was less than 1ug/ml. All postoperative periods were normal and from 1 to 6 tests using both methods were performed. From 36 SCT readings, 27 were positive (in 13 patients) with a mean of 10.2ug/ml (range 1.2-96.8). Positive LPA was found in 5 readings in 4 patients. In only 2 cases the SCT detected high concentration of FDP together with strong positive LPA (dilutions 1/10 and 1/20). It is concluded that the frequent appearance of FDP during early postoperative period of cardiovascular surgery, because of the low incidence of positive LPA, does not necessarily indicate plasminolytic activity, as it is possible that this should appear as a result of absorption of extravascular resolution of fibrin related material.

CHARACTERISATION OF SERUM FDP PRODUCED DURING ENHANCED FIBRINOLYSIS. D.A. Lane and V.V. Kakkar. Thrombosis Research Unit, King's College Hospital Medical School, London.

The serum FDP produced in patients in response to defibrination with anocrod and to thrombolytic therapy with intermittent streptokinase/plasminogen infusion have been characterised using a method of solid phase immunoprecipitation followed by polyacrylamide gel electrophoresis in the presence of sodium dodecyl sulphate (1). Using this method it is possible to distinguish between the plasmin degradation products of fibrinogen and Factor IIIa induced crosslinked fibrin. During anocrod administration, fragments of similar mobility to fibrinogen fragments X, Y, D and E are present in serum samples taken 24 hours after the initiation of treatment, while subsequent sera contain mainly fragments with the same mobility as fibrinogen fragment D. The intermittent nature of the streptokinase/plasminogen infusions produces fibrinogen fragments X, Y, D and E in the sera 1 hour after each daily streptokinase/plasminogen administration. There was an early clearance of fragment E from the circulation of patients receiving either anocrod or streptokinase/plasminogen infusions. The presence of the D dimer fragment, which is produced only by plasmin lysis of fibrin crosslinked with Factor XIIIa, could not be conclusively confirmed in either group of patients.

1. Lane, D.A., Scully, M.F. and Kakkar, V.V. Thrombosis Research, 9, 191, 1976.