

Time  
10.00

0656 FIBRINOLYSIS INHIBITION AFTER A STANDARDIZED TRAUMA, TOTAL HIP REPLACEMENT SURGERY

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Inhibition of the fibrinolytic system with delayed elimination of fibrin from the lungs after trauma is probably an important factor in the pathogenesis of the delayed microembolism syndrome. In the present investigation the posttraumatic inhibition of the fibrinolytic system was studied in 20 patients. Lowered levels of plasminogen and plasminogen activators in the blood as well as a decreased response to the venous occlusion test were found after trauma. The most impressive finding was a heavily increased fibrinolysis inhibition activity (FIA) measured by a clot lysis assay with a maximum 3 days after trauma in plasminogen depleted serum. After gel filtration of these sera on Sephadex G-25 the protein-fractions showed a loss of FIA but the same posttraumatic increase as in whole serum. Antibodies against the primary fibrinolysis inhibitor (PFI) ("α<sub>2</sub>-antiplasmin") strongly reduced the FIA in posttraumatic serum. A good correlation was seen between the increase of PFI with affinity to plasminogen (PFI:α) and FIA whereas PFI:β (with lower affinity to plasminogen) showed a weak correlation to the posttraumatic FIA increase. The strong FIA of the fraction adsorbed to the plasminogen was apparently due to PFI:α and not to α<sub>2</sub>-macroglobulin or α<sub>1</sub>-antitrypsin. This investigation showed that PFI:α seems to be of major importance for the posttraumatic increase in FIA.

10.15

0657 ANTIPLASMIN LEVELS AFTER SURGERY: THE FAILURE OF α<sub>2</sub> ANTIPLASMIN RISE IN PATIENTS WITH VENOUS THROMBOSIS

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Levels of antiproteases have been determined before and after surgery in twenty-five gynaecological patients by rocket immunoelectrophoresis using specific antisera. The patients who developed deep vein thrombosis during the first post-operative week were identified by screening all patients with the <sup>125</sup>I fibrinogen scan. α<sub>2</sub> antiplasmin rose post-operatively in all fifteen patients who did not develop thrombosis. This rise was not modified in those patients receiving low-dose heparin. In the patients who developed positive fibrinogen scans no rise in α<sub>2</sub> antiplasmin occurred and on the second post-operative day levels in these patients were significantly lower than in the fifteen patients whose scans remained negative. In contrast, α<sub>2</sub> macroglobulin tended to fall post-operatively but this change was only significant in the thrombotic group. α<sub>1</sub> antitrypsin levels rose significantly in both thrombotic and non-thrombotic groups after operation. Plasmin-α<sub>2</sub> antiplasmin complexes were not found in the thrombotic patients so that consumption of α<sub>2</sub> antiplasmin does not explain the lower levels observed.

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