SERUM ANTITHROMBIN III IN CEREBROVASCULAR STROKE. S.Takamatsu, S. Sakuta, K. Henmi Y. Tamada and S. Mizuno. Dept. Pathologic Physiology, Inst. Cerebrovascular Dis., Hirosaki Univ. Sch. Med., Hirosaki, Japan. H. Sugawara. The Reimeikyo Rehabil. Hosp., Ikarigaseki, Japan.

The purpose of this study is to evaluate the significance of serum antithrombin III (AT III) in acute cerebrovascular stroke. AT III levles were determined by means of single radial immunodiffusion method in 73 serum specimens of 19 patients with cerebral hemorrhage (C.H.), 129 of 24 patients with cerebral infarction (C.I.) and 82 of 82 healthy controls. AT III levels of patients with C.H. and with C.I. on the lst day of the attacks were significantly higher than the value of controls. The high levels maintained from the lst to the 25th day exculding 7th and 8th days in hemorrhagic patients. In patients with C.I., the levels from the 6th to the 25 day were significantly higher than that from the lst to the 5th day. No difference was found in the types of the diseases. In 150 serum specimens obtained from the lst to the 7th day, AT III levels were significantly lower in the patients with high fever, disturbance of consciousness and abnormal ECG findings than those in patients without these clinical findings. In serum specimens obtained from the 5th to the 7th day, AT III level of survivals were significantly higher than that of the dead. AT III levels in patients with high FDP levels were higher than those in patients with normal FDP levels. In C.I., AT III levels were directly proportional to prothormbin and plasminogen levels, and were inversely proportional to α_1-antitrypsin levels. It is supposed that high AT III levels in acute stroke patients are caused by the protective effects on excess thrombus formation occurring parimarily in C.I. and secondarily in C.H. The high levels in both types of strokes and the close relation to outcome of patients indicate usefulness in the clinical evaluation of patient's prognosis.

β-THROMBOGLOBULIN CLEARANCE. Joan Dawes, WH Hunter, RC Smith, Jeanette Duncanson, CV Ruckley, NC Allan, DS Pepper and JD Cash. MRC Radioimmunoassay Unit, Blood Transfusion Service and Departments of Surgery and Haematology, Western General Hospital, Edinburgh.

The clearance of β-Thromboglobulin (BTG) from the plasma has been studied by different techniques in normal subjects. Infusion of homologous purified iodinated BTG showed complex kinetics of clearance. The initial plasma half life was approximately 20 minutes but this increased to approximately 100 minutes during the latter part of the clearance curve, which was followed for 5 hours. Three per cent of the ^{125}I excreted was immunoprecipitable. In a second study BTG clearance from the plasma and the patterns of urine excretion have been studied by autologous serum infusion 48 hours after withdrawal of 500 mls of blood. The plasma BTG returned to normal levels within 1-2 hours and elevated urinary levels were observed for 3 - 4 hours post-infusion.

APPEARANCE OF ACTIVE FVIII SUBUNITS DERIVED FROM HIGH M.W.FVIII IN HIGH GRAVITY FIELD. Th. Vukovich, W. Doleschel, E. Koller, and W. Auerswald. Univ. of Vienna, School of Medicine, Dept. of Physiology, Vienna, Austria.

To elucidate the type of binding of active subunits in the high M.W.FVIII, a commertial preparation, in isotonic saline, was put on Sepharose 4B and eluted with 0.15M Tris-NaCitrate-eACA at pH 7.0 (Fig.1). A sample of fraction A was centrifuged for 32min. at 2×10^5g in a UZ-cell with a filter paper pad. Globular Proteins of MW>10^6D sedimented into the pad while those of lower MW remained in both pad and supernatant. The latter was applied to S4B (Fig.2) and developed with buffer. Pad proteins were eluted with buffer and the eluate chromatographed (Fig.3). Uncentrifuged sample fraction A was rechromatographed for control; FVIII activity was in void volume only. In contrast, several activity peaks were given by the treated test fractions. The appearance of lower MW factor VIII-active fractions resulting from application of a high gravity field to the > 10^6D MW starting material is evidence against covalent binding of the former to give the latter.