

EFFECT OF INTRACORONARY AND SYSTEMIC THROMBOLYSIS WITH STREPTOKINASE IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION AND UNSTABLE ANGINA PECTORIS. ON COAGULATION TESTS AND PLASMINOGEN. H. Köstering, K.L. Neuhaus, U. Kasten, J. Schrader, U. Artmann and P. Rentrop. Univ. of Göttingen, Dept. of Internal Medicine; Blood Coagulation Lab., Göttingen, W-Germany

Streptokinase, applied by intracoronary infusion in pat. with acute myocardial infarction has proven to be successful in recanalisation of occluded coronary arteries. The good clinical, angiographic, chemical and EKG results suggests that jeopardized myocardium was salvaged by acute recanalisation. Till now, we infused Streptokinase (about 2000 U/min) in 78 pat. into the ischemia related occluded coronary artery. In this presentation we intend to demonstrate the results of these pat. and of a study, done before starting intracoronary Streptokinase infusion to be safe for bleeding complication. Neither after the infusion of 50 000 U. (n = 24) of 100 000 U. (n = 15) nor in 20 pat. who received SK equal to their ASTK-titres plus 50 000 U. SK we found severe alterations of the blood-coagulation system. Only in the last group there was a small decrease of Fibrinogen of about 100 mg% and of Plasminogen 4 mg%. In none of the 78 pat., treated by intracoronary SK application, we resulted bleeding complication and the mean values of blood coagulation test remained within the normal range.

On the other hand, we infused SK by veins and controlled the thrombolytic effect by coronarangiography. In 5 of 6 pat. we succeeded in recanalisation of occluded coronary arteries within 45 to 81 min. Though we used very high dosages of SK, (about 2 Mill U) there was only a small decrease of 210 mg of Fibrinogen and no bleeding complications.

SERUM MYOGLOBIN IN ACUTE MYOCARDIAL INFARCTION: CONSERVATIVE TREATMENT VERSUS ACUTE REVASCULARISATION BY INTRACORONARY STREPTOKINASE. H. Kaiser, G. Sold, H. Blanke, J. Schrader, P. Rentrop, H. Kreuzer. Department of Internal Medicine, Division of Cardiology, University of Goettingen, F. R. G.

Serial serum myoglobin (Smb) and CK were determined in 20 patients with angiographically proven acute myocardial infarction due to acute occlusion of a major coronary artery branch. In 10 patients treated medically Smb peaked 10 hours before CK, both peak values and total release correlated with percent akinetic segment in the chronic stage. 10 patients had effective revascularisation by intracoronary application of streptokinase. Here CK and Smb peaked earlier with Smb reaching its maximum 6.5 hours before CK; both maxima were higher than in the conservatively treated group. There was no linear correlation between CK and Smb peak or CK and Smb release and extent of akinetic area indicating an improved wash-out from the infarcted area. Interrelations between jeopardized area reperfusion time and delay, and myoglobin release are discussed. In all these cases Smb seems to be the best biochemical parameter indicating successful reopening of acute occluded coronary arteries by intracoronary thrombolysis with streptokinase.

COMPARATIVE EFFECTS OF TISSULAR UROKINASE AND URINARY UROKINASE IN THE TREATMENT OF 30 PATIENTS WITH PULMONARY EMBOLISM AND DEEP VENOUS THROMBOSIS.

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Two types of Urokinase are actually available for the clinical use: tissular urokinase (tUK), isolated from cell culture and urinary urokinase (uUK), partially purified from human urine. Their clinical and biological effects have to be compared.

In this study 30 patients with acute pulmonary embolism and/or deep venous thrombosis were treated, using tUK or uUK, 4500 units/kg, during 12 hours.

In the clinical field pulmonary angiographies, scintigrams, and phlebographies were obtained before and after the treatment. The biological study was first established on serial determination of fibrinogen, platelets, Quick Time, FDP using two methods and euglobulin lysis time. At the end of the treatment plasmatoc samples of each patients were studied by immunoprecipitations followed by polyacrylamid gel electrophoresis, in the view of evaluation of the D dimer E complex. Two methods were used (LANE D.A. and al., 1977 and WHITAKER A.N. and al., 1980).

The results showed a quick similar improvement of the clinical situation. In return tUK appeared to be more effective on the biological point of view. Significant differences were found in: decrease of fibrinogen, increase of FDP and the presence of D dimer fragments. The better action of tUK, especially on the fibrin depositions, is so far unexplained.

FIBRINOLYTIC THERAPY OF SUBCLAVIAN-AXILLARY VEIN THROMBOSIS WITH UROKINASE. R. Zimmermann, H. Mörl, J. Harenberg, E. Janssen, H.M. Kuhn, P. Wahl. Medizinische Universitätsklinik, Heidelberg, GFR.

Acute vein thrombosis of the upper extremity occurs in consequence of trauma, stress, effort or spontaneously. The management was often performed conservatively, including anticoagulation and elevation of the involved arm. But the incidence of chronic residual edema, pain or disability in 68-95 % of the cases suggests that active therapeutic procedures should be considered.

In 18 cases with recent and older thrombosis of the subclavian and axillary veins fibrinolytic therapy was performed with urokinase in combination with heparin. Urokinase and heparin therapy was adjusted to attain an anticoagulant effect not exceeding that aimed at usually by heparin alone. 7 of 11 patients with recently developed (8 days or less) thrombosis showed a complete recanalization of the venous system. 2 cases demonstrated a partial success. In 2 patients no phlebographic alteration could be stated. These 2 patients had received urokinase at the lowest maintenance dosage of only 970 and 1000 IU/kg/h, respectively. In addition 7 patients with thromboses more than 10 days old showed no alteration of the thrombotic occlusions. Relevant side effects were not observed.

The therapeutic results unequivocally depended on the thrombus age, the dosage of urokinase applied and the duration of the fibrinolytic therapy. Under treatment with an median, initial maintenance dosage of urokinase 1300-2000 IU/kg/h in combination with heparin excellent therapeutic results could be attained. Our data suggest that the here presented therapeutic procedure has to be considered in serious cases of recently developed subclavian-axillary vein thrombosis.