12 hours indicating efficacy of the antiserum; there was no significant increase in recovery rate in the heparin treated group. We conclude that heparin confers no advantages when specific antiserum is available. The presence of noncross linked FDP indicates early fibrinolysis of fibrin or soluble fibrin complexes before cross linking can occur.

B. Lipinski, V. Gurewich and E. Hyde (Vascular Laboratory, Lemuel Shattuck Hospital, Tufts University School of Medicine, Boston, Mass. 02130, U.S.A.): **Fibrinolysis Versus Fibrinogenolysis: The Specificity of Human Vascular Activator (VA) as Compared to Urokinase (UK) and Streptokinase (SK). (111)**

Activation of fibrinolysis by venous occlusion or exercise was shown previously not to cause degradation of plasma fibrinogen either in vivo or in vitro. The proteolytic effect of activated fibrinolysis was evident only when substrate was in a solid phase (fibrin or precipitated fibrinogen). In this study, clotted and unclotted plasma was incubated at 37° C for 18 hours with 3 activators. SK and UK induced degradation of both fibrin and fibrinogen, whereas VA was active exclusively on the fibrin substrate. Moreover, VA did not alter the mobility and concentration of 2 fibrinogen fractions found on plasma electrophoresis in 3.5% SDS-polyacrylamide gel. However, when VA was incubated with isolated fibrinogen (plasminogen rich) degradation took place. The addition to this purified system of normal serum or plasma diluted up to 100-fold, inhibited fibrinogenolysis but not fibrinolysis. It is concluded from these experiments that human blood contains a specific and highly potent inhibitor which forms a complex with VA. Dissociation of this complex requires a solid phase thus allowing plasminogen to be activated. This inhibitor appears to be highly specific for VA. It is postulated that direct fibrinogenolysis in man is not induced by naturally occurring plasminogen activators. The catabolism of fibrinogen may involve other proteolytic enzymes, or alternatively an intermediate solid phase.

H. Kitaguchi and S. Izaki (Kobe University School of Med. Kobe, Japan): **A Physiological Study on the Releasing Mechanism of Plasminogen Activator from the Vascular Wall. (112)**

Some precise information is described of the releasing mechanism of plasminogen activator from the vascular wall. Using the isolated hind leg of dog perfused with Hank's solution under the physiologically controlled conditions by a modified Dale Schuster type circulation system, the activator activity and flow rate of the perfusate were carefully estimated every fifteen seconds after administering the vasoactive agents of different kinds.

A transient but steep rise of the activator activity was definitely observed when some vasodilators (acetylcholine, histamine, bradykinin and eledoisin) and the strong vasoconstrictors (adrenaline, noradrenaline and vasopressin) were administered. However, such effect was hardly observed when other dilators (isoproterenol and papaverine) and a weak constrictor (serotonin) were given. Concerning the minimum effective dose and the total sum of the activator released effect of the active dilators was found clearly predominant compared with the active constrictors, In addition, it was indicated that, in term of releasing the activator, the constrictors required Ca ion but the dilators did not.

Results obtained imply that the activator releasing is triggered by the strong vasoconstriction, and more predominantly by a Ca ion independent membrane reaction due to the vasodilators without accompanying the vasodilatation.

W. Buczko, R. Franco, G. Bianchetti, M. B. Donati and G. de Gaetano (Istituto di Ricerche Farmacologiche 'Mario Negri', Via Eritrea, 62–20157 Milano, Italy): **Positive Chronotropic Effect of Dialysable Peptides Derived from Plasmin Digestion of Bovine Fibrinogen Preparations. Role of Cyclic AMP. (113)**

Dialysable peptides (< 5,000 M. W.) derived from plasmin digestion of bovine fibrinogen preparations (Kabi) exerted a marked positive chronotropic effect on isolated rat atria. This effect reached a peak within two to four minutes, lasted as a plateau during four to six minutes and then slowly disappeared. It was abolished by glycolytic inhibitors such