

## MIXED POSTERS VIII

## Coagulation

THE EFFECT OF VITAMIN K ON PIVKA AND THE ASSOCIATED PROCOAGULANT PROTEINS IN LIVER DISEASE.  
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 Infirmary, Sheffield, England.

Vitamin K deficiency is associated with low procoagulant activity of the vitamin K-dependent clotting factors together with normal concentrations of an immunologically cross-reacting protein associated with the appropriate clotting factor.

In this study we have examined the response of the clotting factors II, VII and X together with their appropriate related antigens to the intravenous administration of vitamin K<sub>1</sub> in 14 patients with various forms of liver disease. We have also related the observed changes to alterations of the inhibitor activity of PIVKA as detected by the modified thrombotest.

A relationship has been established between the rate of appearance of procoagulant activity and the rate of disappearance of PIVKA after the intravenous administration of vitamin K<sub>1</sub> in those patients with thrombotest inhibitor activity. In this same group of patients it can also be shown that PIVKA is physico-chemically dissimilar to the related protein of normal individuals.

Patients without thrombotest inhibitor activity appear to synthesise decreased amounts of a structurally normal protein which is not influenced by vitamin K.

TREATMENT OF CONGENITAL FACTOR VII DEFICIENCY WITH A NEW CONCENTRATE. G. Mariani, P. M. Manucci, G. Mazzucconi, Z. M. Ruggeri. Institute of Hematology, Univ. of Roma and Hemophilia & Thrombosis Center, Univ. of Milano, Italy.

A commercial factor VII concentrate, made from ACD plasma by a process involving successive adsorptions of cryoprecipitate supernatant on DEAE Sephadex and of the resulting supernatant on Al(OH)<sub>3</sub> was administered to 10 patients with severe factor VII deficiency. 5 patients received only one dose for treatment of single bleeding episodes, the remaining 5 were given multiple doses (47) for spontaneous hemorrhages or for the prevention of surgical bleeding. The factor VII recovery in vivo ranged from 43 to 126% (average 88%) of the assayed in vitro activity of the concentrate. A dose of 0.5 factor VII u/Kg b.w. was found to produce a 1% rise of plasma factor VII level. The mean half-life of injected factor VII as assessed in 7 kinetic studies was 205 min (range 168-234). Spontaneous bleeding was easily controlled by the concentrate and major surgical procedures (two tonsillectomies) could be performed without complications. One patient developed HBsAg positive hepatitis, but otherwise no serious side effects were observed. Factor VII concentrate reduces the risk of precipitating circulatory overload associated with the use of plasma and avoids the unnecessary rise of factor II, IX and X which follows prothrombin complex concentrates while still achieving hemostatic factor VII levels.