ELECTROIMMUNOASSAY OF FACTOR IX IN THE DETECTION OF HAEMOPHILIA B CARRIERS. F. Panicucci, U. Baicchi, A. Sagripanti and E. Pinori. Haemophilia Centre, St. Chiara Hospital, University of Pisa, Pisa, Italy.

Parallel determinations of factor IX activity and factor IX antigen were carried out on 28 haemophilia B carriers and on 20 normal women. Factor IX activity was measured by a one stage method. Factor IX antigen was quantified by electroimmuno assay in agarose gel containing heterologous monospecific anti-serum against human factor IX.

The activity was observed to be at the same level as the antigen in normal women. Discrepancy was not found between the antigen and the activity in almost all of carriers: only in the mothers of haemophiliacs B⁺ or B₂ the factor IX antigen resulted greater than that activity. Our results show that electroimmuno-assay may be used to study carriers of haemophilia B genetic variants and confirm that in the majority of cases they can probably be diagnosed on the basis of factor IX activity alone.

PLENARY SESSION

FACTOR VIII INHIBITORS: THERAPEUTIC RESPONSE TO PROTHROMBIN COMPLEX CONCENTRATES. J. Penner and P. Kelly, University of Michigan, Dept of Internal Medicine, Ann Arbor, Michigan, U.S.A.

Prothrombin complex concentrates, two commercial (Proplex, Konyne), and two "activated" products (spontaneous - Auto IX, and controlled - CAP) were employed in the management of bleeding episodes in hemophilic and non-hemophilic patients with Factor VIII inhibitors. Auto IX's response rate has been high - approximately 80% - providing a sufficient quantity is administered, while CAP's, presently under investigation, appears similar. Commercial products have been less effective, as indicated by clinical and laboratory observations. Recent changes in manufacturing procedures have reduced the response rate of these non-activated concentrates.

The duration of effect achieved with these products appears short, perhaps 4 to 6 hours at most, and repeated administration at 6 or 8 hour intervals is recommended until bleeding is controlled. Doses capable of reducing partial thromboplastin time values to less than twice normal (less than 60 seconds) should be employed. A Factor VIII correction unit based on the product's capacity to correct Factor VIII deficient plasma has been useful in predicting a clinical response, and provides values similar to that obtained by mixing the products with inhibitor plasma. Thrombogenicity has not proved to be a problem even when the concentrates have been employed in large amounts.