

	PRP	N Platelets/von Willebrand's PPP	von Willebrand's Platelets/N PPP
Case 19	Abnormal	Normal	Abnormal
All other cases	Abnormal	Abnormal	Normal

Table

normal VIII-related protein, as described by Holmberg and Nilsson (1973).

The three patients to whom cryoprecipitate was given all showed a post-infusion correction of Ristocetin aggregation, although the response of factor VIII and VIII-related protein varied in each case.

To the standard definition of classical von Willebrand's disease, it is now possible to add abnormal Ristocetin-induced aggregation and reduced or absent levels of factor-VIII-related protein. However, more variants of this disorder, two of which have been discussed in this paper, are likely to be described.

References

- Holmberg, L., and Nilsson, I. (1973). *New Engl. J. Med.*, 288, 595.
 Howard, M., and Firkin, B. (1971). *Thrombos. Diathes. Haemorrh. (Stuttg)*, 26, 362.
 Howard, M., and Firkin, B. (1973). *Blood*, in press.
 Zimmerman, T. S., Ratnoff, O. D., and Powell, A. E. (1971). *J. clin. Invest.*, 50, 244.

Thrombotic Tendency and the Efficacy of Long-term Oral Anticoagulant Therapy as Demonstrated by Laboratory Tests

R. D. EASTHAM (*Frenchay Hospital, Bristol*) Following haemorrhage, trauma, surgery, or thrombosis, or in association with carcinoma, the plasma-activated partial thromboplastin clotting time (APTT) tends to be at the lower end of the normal range, or even below it. There is a direct correlation between the prothrombin ratio and the corresponding APTT in blood samples taken from patients treated with long-term oral anticoagulants. In patients treated with oral anticoagulants following venous thrombosis, at any given prothrombin ratio value, the corresponding APTT tends to be lower than in patients with mitral valve disease or following myocardial infarction, similarly treated. In an attempt to define this difference, 5088 results of prothrombin ratios and their corresponding APTT values obtained from 435 patients during 4564 months of anticoagulant therapy have been plotted on a grid.

It was found that there was a highly

significant difference in the distribution of results from patients following myocardial infarction and those following venous thrombosis, whereas there was no significant difference in results from patients following myocardial infarction and those with mitral valve disease. Similarly, there was no significant difference between results from patients treated following venous thrombosis and those who had been treated following cerebrovascular damage. There was evidence of significant change in response to treatment after three months following postoperation venous thrombosis and after one year following so-called 'spontaneous' venous thrombosis, but there was no significant change in response in patients treated following myocardial infarction, during their first, second, or third years of treatment.

Quality Control Trials in the British System for Anticoagulant Control

L. POLLER, J. M. THOMSON, AND I. LECK (*Withington Hospital, Manchester*) The British system for anticoagulant control depends on an official national reagent, the British Comparative Thromboplastin (BCT) and a national system of reporting prothrombin time results, the British Corrected Ratio. There have been eight national quality control studies in Britain in the last two years involving nearly 300 hospitals.

The underlying assumption with the British reference scheme using the BCT was that all participating hospitals would obtain similar results using the national reagent and the recommended prothrombin time technique as described in the Association of Clinical Pathologists' Broadsheet. Quality control trials were designed to test this principle. Studies involved the use of both test thromboplastin reagents and lyophilized plasma samples. The following points emerged: there was considerable individual variation in results from hospital to hospital. Some hospitals tended to produce consistently higher ratios than others.

Three different methods of dealing with the problem appear to be required: (1) a

programme of technical training to focus attention on the technical variables of the prothrombin time test; (2) the widespread provision of the standardized Manchester thromboplastin reagent for use in all routine prothrombin time tests; (3) the regular and widespread provision of standardized lyophilized plasma quality control samples.

The British system for anticoagulant control based on the use of a national thromboplastin reagent with a national system of reporting supported by national quality control studies using lyophilized plasma preparations thus appears to offer a model which many countries abroad have begun to copy to solve their own national problems. Good progress has already been made in this direction in some Commonwealth countries and in South Africa.

A Comparison of Different Methods of Detecting Mucin in Adenocarcinoma of the Lung

A. KENNEDY AND P. D. BURGIN (*Royal Infirmary, Sheffield*) The correct classification of carcinomas of the lung is not only of therapeutic and prognostic importance but is also considered to have epidemiological and aetiological significance. Histological tests for mucin are essential in the classification of lung tumours but there is little information available about the influence of the method of detection used on the results obtained. Five established staining techniques were tested using paraffin blocks from surgical specimens of 81 human lung tumours diagnosed as adenocarcinoma, ie, tumours of WHO type III.

Mowry's alcian blue-PAS technique gave the highest proportion of positives (93%), slightly fewer (90%) being obtained by the PAS technique alone. Both these methods were influenced by the presence of cytoplasmic hyaline globules, structures which cannot be regarded as mucin. The stain recommended by the World Health Organization was also influenced by the presence of hyaline globules, was less frequently positive than the PAS techniques, and was considered to have no special advantages. The aldehyde fuchsin-alcian blue sequence was positive in only 83% of cases but provided some information about the type of mucin present. Southgate's mucicarmine also detected mucin in only 83% of cases.

It was concluded that the apparent