Letters to the Editor

It has also been reported that with the use of capillary viscometers blood is slightly thixotropic, but we doubt whether this could be demonstrated in a rotational viscometer provided the blood was well mixed beforehand.

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Professor Stuart and Dr Kenny reply as follows:

It has been reported on several occasions that viscosity measurements on human blood are dependent on both time and rate of shear.1-3 Using a Contraves Low-Shear 30 viscometer, we have exposed normal blood to increasing shear rate over the range 0-10 mPas. The resulting viscosity tracing (or rheogram) showed a progressive decrease in viscosity as shear rate increased. When the process was reversed, so that the same specimen was exposed to progressively decreasing shear, the reverse tracing did not follow the original curve but showed a lower viscosity at all shear rates, indicating an alteration in the characteristics of the blood. This phenomenon, probably a consequence of red cell disaggregation, is consistent and reproducible and demonstrates that viscosity is time and shear-rate dependent under these experimental conditions of low shear.

The variable shear-stress instrument used by Davenport and Roath works on a different principle and will require to be evaluated in its own right. We estimate, however, that the shear-rate range produced by the shear stresses stated is much higher than our own so that rouleaux would be dispersed. Few rheologists would support the suggestion that a viscometer should first be operated at high shear in order to ‘mix’ blood before readings at low shear are made. As the authors seem to have demonstrated, this technique will disperse rouleaux for several minutes. Yet the effect of plasma proteins in causing rouleaux formation at low shear is probably one of the most determinants of hyperviscosity in patients with vascular disease.

Rheologists are, of course, aware that temperature is a critical determinant of viscosity and must be rigorously controlled. Adequate mixing, but not shearing, of blood before testing is also essential, and even when a well-mixed specimen has been placed in the viscometer cup, the instrument should begin rotation within 60 seconds to avoid false-low readings at low shear rates as a consequence of red cell settling (Inglis, Carson, and Stuart, unpublished).

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References


Book reviews


The porphyrias are a fascinating group of disorders, which impose themselves on all clinical specialties. This monograph is particularly timely because during the past few years the enzyme defect has been demonstrated in at least three of these diseases, our understanding of the pathogenesis of the clinical syndromes has been significantly increased, and there have been useful methodological developments.

In the first chapter Dr Moore takes us gently but thoroughly through the biosynthesis of porphyrins. The acute and cutaneous porphyrins are fully discussed in the subsequent two chapters. Variate porphyria is reviewed by Dr Kramer, and recent studies on the neurotoxicity of amino-laevulinic acid are described. The unique experience of Professor Ippen’s group with congenital porphyria include new clinical observations. An interesting chapter by Dr With on porphyrias in animals and an important contribution on the clinical chemistry of the porphyrias by Professor Elder are followed by a section on drugs and hepatic porphyrin and a discussion of abnormalities of porphyrin metabolism in diseases other than the porphyrias.

This is an excellent monograph; the contributors reflect Who’s Who of the porphyrias, and even George III would be pleased! Perhaps the use of consistent nomenclature throughout the various chapters would have been helpful but nevertheless it is a highly recommended book.

TJ Peters


Readers of this book will have much to interest them concerning the definition and analysis of the problems that face a clinical pathology department introducing a computer into its management. Nevertheless since the system described in this
Tumors of the Ovary and Maldeveloped Gonads. RE Scully. AFIP Atlas of Tumor Pathology. 2nd Series. Fascicle 16. (Pp 413; Figs. 383; Plates 16; US $16.)

Robert Scully's reputation as a master of ovarian pathology can only be still further enhanced by this volume in the second series of the AFIP Atlas of Tumor Pathology. The WHO classification of ovarian tumours is used as a skeleton which is elegantly fleshed out by a lucid text which is permeated throughout with evidence of the author's vast experience of this topic. Further embellishment is provided by nearly 400 black-and-white figures, which are nearly all of high quality, and by 16 colour plates, some of which have a rather garish quality to their tints. A number of electron micrographs are included among the figures, but these are used sparingly to illustrate specific points. The references, though not over-abundant, are carefully chosen.

This book should be on the work-bench of all histopathologists who have to deal with ovarian tumours.

H FOX

Notice

3rd Annual Dermatopathology Colloquium

This will take place at Guy's Hospital, London SE1 on 11 July 1981, immediately preceding the International Dermatopathology Symposium. Further information regarding applications for attendance and details relating to submission of abstracts may be obtained from Dr DM MacDonald, Department of Dermatology, Guy's Hospital, London SE1 9RT.