principles on which the various tests are based and concludes with a critique of their clinical scope and limitations.

As often happens with books that have outgrown their original purpose and where there are many authors instead of one, variations in standard and presentation are the price of comprehensiveness. The chemical section is perhaps the most impressive: it shows up the close liaison which can be achieved between ward and laboratory which is so striking a feature of the best of American medicine. The laboratory worker sometimes forgets that the most sensitive test is only as useful as the clinician can make it by interpreting the results correctly; and conversely, the clinician evaluating results, does not always take into account that their value is limited by the accuracy with which they can be reproduced in the laboratory. A book like this can help to bridge the gaps. It is, however, too detailed for resident staff with emergency duties in the laboratory. They neither need nor want to know six different methods for estimating haemoglobin. Several of the methods, especially in the section on haematology, do not conform to British practice (coverslips for example, are used for blood films and differential counts). In spite of this, clinical pathologists who are truly clinical and physicians who wish to understand the investigations they are ordering or doing themselves will find the book of great value.


The recognition of the necessity for routine micro- and even ultra-micromethods of the chemical analysis of blood comes, perhaps, most easily to the pathologist in a children's hospital where the amount of blood available for analysis is often limited. This little laboratory manual is essentially a description of the microchemical methods in use in the laboratory of The Children's Hospital in Great Ormond Street. The introductory chapters deal with the techniques of the collection of blood specimens and the apparatus required, and contain pertinent remarks on the control of the results. In the following chapters, the methods described are grouped together according to the function they are designed to investigate, e.g. liver function tests, tests of protein metabolism, etc., with each chapter prefaced by brief remarks on their use and interpretation. The final chapter deals briefly with ultra-micromethods. The practical details of each method described are clearly set out and are easy to follow.

Given its somewhat limited scope, this book will be found useful, especially for biochemical technicians and, possibly, pathologists in a general hospital with a children's ward where babies are often subject to frequent venesection because of the lack of experience in micromethods. Its appeal, however, is diminished by the limited scope of the book. Only one method is described for each estimation. Possible difficulties are not mentioned, nor the possible errors involved. Other than the reference to the original description of the method selected, few references are given to the literature. The prefatory discussion in each chapter on the clinical uses of the tests is too brief to be useful. Chemical pathologists would find it of use only as an adjunct to the larger works or to the original literature, and interesting mainly as the description of the routine chemical pathology in a large children's hospital. The appendix gives the normal values in children and adults, using these micromethods.

It must be pointed out that the normal full-term newborn infant has a much higher serum protein level than that stated and it should be made clear also that the serum protein level of premature infants varies with the birth weights. It is very misleading to give an overall value when the birth weight of the premature infant can vary from 2 to $5\frac{1}{2}$ lb. The serum gammaglobulin level of the newborn infant is also incorrectly given. It is actually slightly higher than that of the adult, and not half, as stated.

The book is well printed on good paper, but 40 shillings seems excessively expensive.


This book records the proceedings of a meeting held at Princeton, New Jersey, in December, 1957, under the sponsorship of the Macy Foundation and the C.I.O.M.S. The discussions covered a wide range of subjects, from the general physiology of oxygen transport in the adult and the foetus to the vascular anatomy of the placental circulation (an admirable and concise account from Elizabeth Ramsey), from new methods for measuring oxygen tension in the blood and tissues to a general discussion on the significance of umbilical cord blood studies. There is much factual information here which has been carefully arranged and which is not readily available elsewhere. It is not easy reading because of the wide variety of subjects and techniques which were considered, and because of the interpolated discussions. On the other hand it is difficult to see how the material could have been arranged otherwise without considerable sacrifices. Many of the discussions were both informative and stimulating, on the technical aspects of blood gas analysis for instance, and on the changes which may occur during foetal distress. The recent studies on the changes in pressure and oxygen content of the blood in the intervillous space were of particular interest. And there have been some careful measurements of uterine blood flow in man, though the indirect methods used should be compared with a direct method (in animals).

The difficulties which the editors experienced in arranging this diverse material derive from our lack of basic knowledge in this subject, in which so much is still speculative. The relative inaccessibility of the foetus in utero is as frustrating to the obstetrician who wishes to know what is going on inside, as it is to the physiologist who wishes to know how it does so. This book sets out many of the facts so far established, and proposes a number of questions to which answers are needed, and which should not be too hard to supply.