leptospirosis based on direct dark-ground examination alone is not to be recommended. This applies not only to the routine diagnostic laboratory with limited experience of leptospires but also to those institutes engaged in research or vaccine development and control work in which the use of experimental animals is required.

**Reference**


---

**Book reviews**


This expensive, high-quality atlas will add prestige to any departmental bookcase but for the same reason it may be found less often by the trainee's elbow on the microscope bench. Many of the beautiful watercolour reproductions of the earlier editions have been retained and these, because of their size, tend to dominate the atlas. Conversely, the magnification of the Pappenheim-stained photomicrographs is sometimes too low to enable the cells to be identified clearly. Although a few painted illustrations are of value to the inexperienced, when they are widely used there is a danger that the trainee requires to learn two types of morphology—the photomicrograph and also the artist's impression of it. For those who like this approach, however, the atlas is of unique value.

There are sections on tumour cell morphology, parasitology, and transmission (but not scanning) electron microscopy, and cytochemical reactions are included in most of the sections. Although marrow trephine biopsies have become a regular feature of modern haematological practice, the atlas is restricted to marrow aspirates with a one-sentence reference to the widely used Jamshidi biopsy technique. There are, however, useful illustrations of spleen and lymph node aspirates and touch preparations. The English translation of the text is of limited appeal since it retains some old terminology with German nomenclature ('partly englied' to quote a table).

**J STUART**


The authors' aim has been to coordinate present physiological knowledge with clinical experience.

After chapters concerned with bone, and calcium and phosphate homeostasis, a further six chapters cover hypocalcaemic states, hypercalcaemic states, rickets and osteomalacia, osteopenic and osteosclerotic disorders of bone, urinary tract stones, and ectopic calcification. Each chapter ends with quite extensive but carefully selected lists of references grouped under several headings for ease of referral.

The Harrisons have based this volume on their own many years of experience in the wards and the laboratory. Their personal approach to the problems of the sick child show on every page, and many tables and graphs refer to individual patients whom they have seen. Many well-chosen and beautifully reproduced photographs are included and these enhance the value of the book. An unusual feature is the inclusion of several long case histories at the end of most of the chapters. These will be of particular interest to those without a medical background.

Although the major use of this book will be by paediatricians, it is a volume which those who are providing a clinical biochemistry service for children will wish to have available for reference. Clinical problems concerned with calcium and phosphate metabolism are frequently complex, and the role of the laboratory is important. The authors have produced a volume of interest to clinical and laboratory workers alike. It is highly recommended.

**BARBARA E CLAYTON**


It is interesting to compare this issue of the *British Medical Bulletin* with earlier issues published in 1947, 1958, and 1964 on the same subject. The discovery of ways in which chemicals of widely differing structure can be converted in the body to electrophilic metabolites which react with genetically significant macromolecules in cells has been the most important single development. Next to this has been the development of highly sensitive methods for detecting interactions between chemicals or their metabolites with DNA using microorganisms. Several of the contributions