BOOK REVIEWS
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This remarkable atlas, the first of its kind, is a most important contribution to our knowledge and understanding of the structure and cellular composition of human lymph nodes. It will undoubtedly be of unusual interest to pathologists, hematologists, and immunologists. The first section of the book represents the first systematic effort to define, by electron microscopy, the composition of the normal human lymph node. Even if one cannot completely agree with the authors' classification of cells according to their age, this section is extremely well done. There are excellent photographs and diagrams of each cell type, and the justly cautious text stresses the importance of the environment in molding the cellular components of the node. The second part of the book deals with tumors. Over 150 biopsy specimens were collected and, since only 13 were taken from previously treated patients, the material is truly representative of early, untreated diseases. Separate chapters are devoted to lymphosarcoma and lymphocytic leukemia, Hodgkin's disease and metastases to the lymph nodes. While it is true that in the field of lymph node pathology, architecture and cellular composition are more important than structural changes in individual cells, electron microscopy can make a definite contribution in this area, although it does not solve the problem of differentiating among closely related malignancies of reticulum cells and lymphocytes. The authors quite correctly point out the value of semi-thin sections, with which it is possible to observe the same cells by both light and electron microscopy. Several beautiful examples of this technic are shown. Another highlight of this book is its discussion of the difficulties of detecting oncogenic viruses with the electron microscope. The attempts of Bernhard and Lefius to show viruses in various lymphomas were unsuccessful. Nuclear lesions of differentiated lymphosarcomas, which may have been produced by latent viruses, are demonstrated. These lesions resemble those observed in cells infected by the SV40 virus. However, the authors emphasize that there is only a morphologic analogy between the two, and this does not prove that the lesions have the same or a similar origin. Although the electron microscope permits clear visualization of abnormalities of chromatin, the nucleus, the nuclear membrane, mitochondria and other components of the cell, it has not yet revealed the structural substrate of malignancy. Unfortunately, none of the observed morphologic changes in malignant cells is specifically linked with the cancer process. These alterations may be an expression of accelerated growth, or may perhaps represent trophic changes related to necrobiosis. There is no proof that these structural alterations are anything but epiphenomena, and not the specific expression of malignant transformation. These views have been cogently summarized by Bernhard and Lefius.

This atlas, then, is a remarkable achievement. It is the first of its kind in electron microscopy, and the material on the normal lymph node surely represents a formidable and pioneering effort. The pictures are beautifully reproduced by Brunissen's procedure. The legends are clear and precise. Each specimen of malignancy is presented together with a brief but useful clinical summary. The text, in both French and English, is short, enlightening, and well documented. This book is at once a work of art and a high scientific achievement.—Janine André-Schwartz

The vexing problem of classification of the acute leukemias is well known to hematologists, and has been dealt with by many authorities. Reference to three standard texts will give some idea of its status. (1) Clinical Hematology (Wintrobe): "... Criteria for differentiation of different types of leukemia differ from one clinic to another... it is difficult for even an experienced hematologist to distinguish the various types of leukemia." (2) Leukemia (Dameshek and Gunz): "How many cases of acute leukemia can be classified according to the predominant cellular type is a matter of debate and often of personal conviction. We believe that a study of the morphology of the blasts alone, and by ordinary staining methods, cannot lead to their inclusion in one or the other of the cell series, except in a few cases." (3) Leukaemia. Research and Clinical Practice (Hayhoe): "In the absence of generally accepted and clear-cut criteria for differentiation of acute leukemic cells, no firm conclusions can be drawn as to the relative incidence of types..." The problem was brought out very clearly by the experience of the Medical Research Council in its attempts to classify all new cases of acute leukemia prior to inclusion in a chemotherapy trial. Eight hematologists from leading British centers were asked to make a cyto logic classification of their cases and then to submit the slides to their colleagues for their interpretation. The degree of disagreement was "surprising" and even more discouraging was the finding that when slides were recirculated, "the observer often gave a different diagnosis from the one he had given originally." The issue, then, boils down to the following: the most pressing, even urgent problem in clinical hematology is acute leukemia, a disease we cannot even diagnose accurately. How would a cardiologist feel without his cardiograph and catheter? Probably the same as a hematologist faced with a marrow smear containing "numerous blasts of undeterminate type."

Two British hematologists and a statistician have faced this problem utilizing a tool that has gradually been making inroads into the "art" of medicine during the past decade—the electronic computer. In this case it was the "Mercury" computer of the London University Computer Unit. Having decided on a set of morphologic and cytochemical criteria, such as cell size and shape, indented nuclei, presence of multiple nucleoli, Auer bodies, PAS, Sudan black, peroxidase and alkaline phosphatase stains, they reviewed 140 bone marrow smears and carefully noted the presence or absence of a given cytochemical feature. The data were then fed to the computer. After suitable (?) adjustment, it was found that the computer had divided the 140 cases into 4 groups, P, Q, R and S. These were recognized as corresponding to erythremic myelosis, lymphoblastic leukemia, monocytic leukemia and myeloblastic leukemia. Despite the machine, however, 15 cases could not be classified. These unclassified cases may, in the authors' opinion, represent variants of the original 4 types rather than a separate stem cell form. Several important points emerged, including (1) Auer rods are not diagnostic of myeloblastic leukemia; they were also found in the monocytic, erythremic types, but never in the lymphoblastic variety, (2) a low leukocyte alkaline phosphatase score favors the diagnosis of acute myeloblastic leukemia over the other types (3) PAS positivity in erythroblasts is strong evidence of erythremic myelosis; PAS positivity in other types of blast cells is of little help in classification, (4) the cytochemistry of blast cells found in the blast crisis of chronic granulocytic leukemia is distinctly different from that of the blast cells in acute myeloblastic leukemia.

The labors that went into this project are hinted by Table I which drones on for 27 pages, giving the cytologic findings in each of the 140 patients. Was it worth it? Did the machine help? This remains to be seen. As the authors point out, "the results that have been obtained in this analysis are not necessarily the only ones that could be derived from the original data... Further experience alone will show whether the suggested scheme is robust and whether the results can be repeated with more extensive data." But at least it is a much needed beginning and the authors are to be warmly congratulated for be-
ginning, not with cant or dogma, but with objectivity and scientific methodology. Hopefully, an international conference with the purpose of establishing and promulgating definitive criteria for the cytologic diagnosis of the acute leukemias might be arranged, with the Hayhoe-Quaglino-Doll study as the starting point. Even more hopefully, accurate diagnosis of these conditions will open the way to a new and better understanding of leukemia.

—Robert S. Schwartz


This multi-authored text dealing with the treatment of leukemia and malignancies of the lymphoid system suffers from the major fault of many of its genre—poor quality control. The result is that several fine contributions are made to share a place in this book with others of lesser merit. For example, the chapter on involvement of the skeletal system by Thomas, Frei and Hilbish is thoughtfully written and beautifully illustrated, clearly indicating the expenditure of much time and effort by these authors in completing their assignment. In contrast, other chapters are slapdash, hastily written statements doing justice to neither their authors nor their audience. This, unfortunately, tends to diminish the impact and value of the entire work. For example, how can a reader have confidence in a book in which pernicious anemia is classified as a “myelophthisic cytopenia,” that claims that “folic acid is one of the most specific and effective stimulants available to date for basic RE mesenchymal proliferation . . .” (whatever that may be), that considers congenital spherocytosis as due to hypersplenism, or that dismissed in one sentence the use of cyclophosphamide and vincristine in Hodgkin’s disease? The looseness of editorial supervision can also be seen in the mislabelling of photographs, in the entirely unsatisfactory index, and in the lack of correlation and cross references to information scattered throughout the text. For example, uric acid nephropathy is not mentioned in the index, it is not dealt with in the treatment of chronic leukemias, but is described in the chapter on treatment of lymphosarcoma. One cannot find (despite the jacket blurb that no aspect of the treatment of lymphomas and related disorders has been overlooked) mention of the problem of acute leukemia following treatment of polycythemia vera with P32, the use of high dosage corticosteroid therapy in chronic lymphocytic leukemia, an adequate discussion of electron beam therapy in dermal lymphomas, the Cesary syndrome, or leukemic reticuloendotheliosis. The reader is usually offered little evidence to support various recommendations for treatment, other than “preferable,” “drug of choice,” or “may be helpful.” Surely, in a scholarly work we are entitled to more than platitudes. The chapter on treatment of chronic leukemia illustrates the fallacy of the hypothesis that, since chronic lymphocytic leukemia and chronic granulocytic leukemia have in common the word “chronic,” they may be dealt with as a unit. The result is a confusing hodgepodge. Why not discuss chronic lymphocytic leukemia with its closely allied disorder, lymphosarcoma? And why did not the editors insist that Dr. Gall’s photomicrographs be intelligible? In their present state, they are worthless. Why was multiple myeloma excluded? It is as much “related” to lymphomas as chronic granulocytic leukemia and polycythemia vera.

What, then is meritorious in this book? Three chapters represent truly original and carefully written contributions: The Classification and Natural History of the Lymphadenopathies (Robb-Smith); The Skeletal System (Thomas, Frei and Hilbish); and Treatment of Primary Lymphoma of the Lung (Berghius, Clagett and Harrison). Robb-Smith’s chapter lacks illustrations, but one quickly becomes so absorbed by his words that the pictures are not missed. This excellent and beautifully organized discussion of a difficult field is highly recommended. The chapter on bony involvement was already mentioned; it is a model of how clinical data can be collected and presented. The chapter on primary lymphoma of the lung is actually a report of 19 cases of this condition that were seen at the Mayo Clinic and is well worth the attention of hematologists. The remaining chapters
are standard fare, already available in numerous publications and textbooks, and it is difficult to see what they contribute except convenience. The appearance of this book suggests it is time to consider the possibility of handling multi-authored texts in the same manner as any reputable medical journal, where papers are submitted to anonymous referees for a critical evaluation of originality, interest and accuracy. Although cumbersome and time consuming, the method has undoubtedly helped maintain a general high quality of medical literature, particularly in those journals lucky enough to gain the services of hard working and conscientious reviewers. Why should an expensive reference text be denied the same privilege?—Robert S. Schwartz


The sustained and studious interest that Dr. John H. Talbott continues to show in gout serves as an inspiration to students and physicians in general. This interest began during student and house officer days, flourished during a distinguished clinical teaching and administrative career and has been continued since he became Director, Division of Scientific Publications, American Medical Association and Editor of the J.A.M.A. His many publications about gout span a 30-year period and in a way reflect his career, relating personal observations and researches with increasing sophistication. The present edition brings this rich experience and knowledge to all who turn its pages.

Gout is steeped in history, folk and medical lore. Like many disorders, the bare clinical, therapeutic and underlying basic metabolic concepts, so brilliantly recorded by giants of the past, have yielded in recent years to equally brilliant researches into basic pathogenetic mechanisms. The Sydenhams, Garrods, Fischers and their like have been followed by Talbotts, Thannhausers, Gutmans, Stettens, Wyngardens and others of recent years. Modern research, as in many other diseases, has served to emphasize the complexity and infinite variations of the disorder. No longer can gout be regarded as a simple single clinical disease with a flamboyant past, following more or less predictable patterns and responding to empirical yet effective treatment. Of these matters Dr. Talbott shows himself well aware. The concept of a single disease was first split by the term "Secondary gout." This term, originally applied to gout associated with proliferative disorders of hematopoiesis, has broadened to the point that doubts arise as to what is really "Primary" and what is "Secondary." "Primary gout," meaning the time-honored hereditable disorder of inborn metabolism, as Talbott's pages show, has been divided into at least two subgroups. We now recognize a form related to disturbances of excretion and another to disturbances of synthesis of urates. We may expect further dissection into subdivisions according to abnormalities of enzymatic and transport systems. As for "Secondary gout," a subject long of special interest to the author, it is significant that the chapter on associated diseases has expanded in seven years from 6 to 23 pages. It is this chapter and that dealing with intermediary metabolism that will command the greatest attention of readers of Blood.

The volume reflects Dr. Talbott's transition from clinician and active investigator to informed and reflective bystander. It incorporates history, basic concepts, up-to-date data on basic mechanisms, diagnosis and therapy of the disease, complex gout, in a still slim volume. The bibliography of 521 references is probably the most comprehensive and up-to-date available. The book is written in the clear, readable style that has stamped the author's many works and the Journal of the American Medical Association under his leadership. True students of medicine of all ages should have it in their book shelves. —James D. C. Gowans, M.D.