Book Reviews

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Retroviruses and Human Pathology

The contents of Retroviruses and Human Pathology is the combined result of 48 presentations that were given at an international symposium held in 1984. The book is organized into five sections and an introduction. The introduction contains three contributions and is very much worth reading. This is particularly true of R. Dulbecco’s chapter entitled ‘The Role of Retroviruses in Nature’ in which the evolution of thinking about the role of retroviruses is reviewed in depth. The review emphasizes the biological significance of retroviruses as transposable elements and the different aspects of the retroviral genomes, including their potential to activate adjacent cellular genes.

The first section deals with ‘Retroviruses and the Murine Model System’ in 9 chapters. Section 2 ‘Retroviruses and the Vertebrate Model System’ contains 10 contributions covering feline retroviruses, bovine leukemia virus from two different groups, type D retroviruses, avian and rat retroviruses.

The third section goes to the heart of the matter: ‘Retroviruses and Human Pathology’ deals with human viruses, HTLV and human immunodeficiency virus, the AIDS virus. The reports are from the group at the Pasteur Institute and from the NIH laboratory. Seven contributions are on the AIDS virus, the remainder are on various subjects like bovine leukemia and mouse mammary tumor virus. One contribution is worth mentioning: ‘Psoriasis – A Retrovirus Disease?’. Actually an interesting story, now discussed by two Norwegian scientists.

The last section contains 11 chapters under the heading ‘Retroviruses and Oncogenes’. Several oncogenes are well-described, e.g. the erb A and B genes by D. Stehelin, the ras oncogene by M. Barbacid, and the raf oncogene by U. Rapp. The other chapters deal with transcripts and the detection of different oncogenes.

The question remains who will buy this book? The book is quite expensive, most of the contributions are addressed to those who work in the same field, who have to buy it. The book should also be available in a standard scientific library.

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into four parts: malignant disorders; hematological disorders; treatment modalities; psychological aspects of care. Chapters of parts 3 and 4 have been written mainly by nurses, while in parts 1 and 2 they were co-authored by pediatricians. Almost all of the chapters in parts 3 and 4 are very good, chapters on bone marrow transplantation and blood products are excellent. The reading of these parts can certainly be recommended to any medical student, but also to residents of pediatric hematology-oncology. Regarding parts 1 and 2 the reviewer is left with mixed feelings. Polycythemia is not really a significant problem in pediatric hematology, and there are no particular nursing considerations. As compared with the chapter on non-Hodgkin lymphomas the chapter on Hodgkin’s lymphoma is very detailed. The chapter on
leukemias is unsatisfactory: chlorambucil is considered to be the leukemogenic agent in the chemotherapy regimens for Hodgkin’s disease (p. 14); cell surface markers are claimed to be in their infancy and as yet not contributing to the classification of leukemias (p. 16); the neutropenic child is said to be immunocompromised (p. 17); results of chromosome analyses of ALL are not correctly reported (p. 19); 25% instead of at least 60% of C-ALLs are said to be of the pre-B type; acid phosphatase is said to be a marker for the classification of AML; in CML, basophilic and eosinophilic cells are ‘rarely’ increased; the PH occurs in 90-100% of the ‘granulocytic’ cells! Many other chapters, however, such as those on Wilm’s tumor, neuroblastoma., rhabdomyosarcoma, anemias, sickle cell disease, thalassemia serve their purpose nicely in being precise, informative, compact. Some chapters can be criticized for their bias toward therapeutic approaches in the United States. Each chapter contains so-called representative case studies (not convincing), useful nursing protocols and a more or less up-to-date list of references.

The book is written in a clear and simple style, thoroughly edited and reasonably priced. It can be recommended to nurses and students, but also to teachers of pediatric oncology and hematology.

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Monographs in Clinical Cytology, Vol. 2
The Cell in Health and Disease:
An Evaluation of Cellular Morphologic Expression
of Biology Behaviour, 2nd revised ed.
Karger, Basel 1986
172 fig., 7 tab.; SFr 99.-/DM 119.-/US $ 42.25/E 31.-
ISBN 3-8055-4150-3

Marilyn J. Hockenberry, Deborah K. Coody (eds) Pediatric Oncology and Hematology
Perspectives on Care Mosby, St. Louis 1986 XII + 546pp.; E27.50 ISBN 0-8016-2253-0
This book has been written mainly by and mainly for nurses. Its purpose is to give nurses, but also social workers and psychologists a comprehensive approach to diagnosis and management of children with hematologic and oncologic diseases. The text is divided
The first edition of this monograph appeared in 1969, and now the second, revised edition has been published. First of all the book is written for use in microscopic diagnostics. Clinical aspects are successfully combined with more fundamental domains. Both of them have expanded rapidly during the last 10 years. That is why the author added a completely new chapter to the first edition: Functional Anatomy of the Interphase Nucleus. The aim is to ‘integrate current understanding of the major nuclear functions and ultrastructural organization for its physiological activities’. The author, however, always considers the practical needs of the microscopist, which determines the contents as well as the method of presentation directed towards nuclear and nucleolar structures on
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the light microscopic and electron microscopic level. Without any doubt, the author has succeeded in achieving a deeper understanding of the phenomena which are dealt with in the other chapters of the book. They present the interrelation between biological behaviour of cells
and cellular morphology, morphological characteristics of general activity under normal
conditions, under increasing or decreasing activity and in malignant transformation. An
extensive last section is devoted to cell morphological features of functional differentiation
(cytoplasm). Mainly the functional differentiation of keratinizing squamous epithelium in its
typical and atypical forms is discussed ending with squamous carcinoma (in situ and invasive);
the functional differentiation of columnar epithelium in its typical and atypical forms up to
adenocarcinoma is also described. Furthermore, the author gives a presentation of the light
microscopic findings during squamous metaplasia and some ma-lignomas with other cell types
of functional differentiation (sarcomas, pigmented cancers, leukemias and lymphomas) and
undifferentiated large cell and small cell cancers.

The author offers a small and condensed book not only for the cytodiagnostician,
cytotechnologist, pathologist, the clinician
working in the field of cell morphology, but also for the cell biologist and investigator and last
but not least for the educator and the student. He gives a comprehensive survey of a widespread
field. This necessitates restriction to the essentials. The presentation excels by its logical design:
one segment is built upon the preceding one. Particularly the section on ‘Functional Anatomy of
the Interphase Nucleus’ helps the reader to build a bridge between the more clinical aspects and
those of cell biology. Nevertheless, the author does not deal with details of molecular biology.
The book is a stimulating guide to thinking, understanding and building reliable concepts. The
book gives the impression that it is written by an experienced cytopathologist. This is expressed
by the selection of the contents, the mode of presentation and last but not least by the elaboration
of general morphological patterns which can be used in diagnostic evaluation. It can also be used
as a reference book, although it does not have the character of an encyclopedia. It can be
recommended to all practitioners and research workers in the field of cell morphology.
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