

YEARBOOK[®]

YEAR BOOK OF PULMONARY DISEASE[®] 2001

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YEAR BOOK OF
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Statement of Purpose

The YEAR BOOK Series

The YEAR BOOK series was devised in 1901 by health professionals who observed that the literature of medicine and related disciplines had become so voluminous that no one individual could read and place in perspective every potential advance in a major specialty. That has never been more true than it is today.

More than merely a series of books, YEAR BOOK volumes are the tangible results of a unique service designed to accomplish the following:

- to *survey* a wide range of journals
- to *select* from those journals papers representing significant advances and statements of important clinical principles
- to provide *abstracts* of those articles that are readable, convenient summaries of their key points
- to provide *informed commentary* about their relevance

These publications grow out of a unique process that draws on the talents of outstanding authorities in clinical and fundamental disciplines, trained literature specialists, and professional writers—all supported by the resources of Mosby, the world's preeminent publisher for the health professions.

The Literature Base

Mosby and its editors survey approximately 500 journals published worldwide, covering the full range of the health professions. On an annual basis, the publisher examines usage patterns and polls its expert authorities to add new journals to the literature base and to delete journals that are no longer useful as potential YEAR BOOK sources.

The Literature Survey

More than 250,000 peer-reviewed articles per year are scanned systematically—including title, text, illustrations, tables, and references—by the publisher's team of literature specialists. Each scan is compared, article by article, to the search strategies that the publisher has developed in consultation with the nearly 200 outside experts who form the pool of YEAR BOOK editors. A given article with broad scientific or clinical implications may be reviewed by any number of YEAR BOOK editors, from one to a dozen or more, regardless of the discipline for which the paper was originally published. In turn, each editor who receives the article reviews it to determine whether it should be included in his or her volume. This decision is based on the article's inherent quality, its relevance to readers of that YEAR BOOK, and the editor's goal to represent a comprehensive picture of a given field in each volume of the YEAR BOOK. In addition, the editor indicates when to include figures and tables from the article to help the YEAR BOOK reader better understand the information.

Of the quarter million articles scanned each year, only 5% are selected for publication within the YEAR BOOK series, thereby assuring readers of the high value of every selection.

The Abstract

The publisher's abstracting staff is headed by a seasoned medical editing professional and includes individuals with extensive experience in writing for the health professions. When an article is selected for inclusion in a YEAR BOOK, it is assigned to a member of the abstracting staff. The abstractor, guided in many cases by notations supplied by the physician editor, writes a structured, condensed summary designed to rapidly communicate to the reader the essential information contained in the article.

The Commentary

The YEAR BOOK editorial boards, sometimes assisted by guest contributors, write comments that place each article in perspective. This provides the reader with insights from authorities in each discipline that point out the value of the article and that often reflect the authority's thought processes in assessing the article.

Additional Editorial Features

The editorial boards of each YEAR BOOK organize the abstracts and comments to provide a logical and satisfying sequence of information. To enhance the organization, editors also provide introductions to sections or individual chapters, comments linking a number of abstracts, citations to additional literature, and other features.

The published YEAR BOOK contains enhanced bibliographic citations for each selected article, including extended listings of multiple authors and identification of author affiliations. Each YEAR BOOK contains a Table of Contents specific to that year's volume. From year to year, the Table of Contents for a given YEAR BOOK may vary, depending on developments within the field.

Every YEAR BOOK contains a list of the journals from which articles have been selected. This list represents a subset of approximately 500 journals surveyed by the publisher and occasionally reflects a particularly pertinent article from a journal that is not surveyed routinely.

Finally, each volume contains a comprehensive subject index and an index to authors of each selected article.

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2001

The Year Book of PULMONARY DISEASE®

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Journals Represented

Mosby and its editors survey approximately 500 journals for its abstract and commentary publications. From these journals, the editors select the articles to be abstracted. Journals represented in this YEAR BOOK are listed below.

Acta Cytologica
Acta Oto-Laryngologica
American Journal of Epidemiology
American Journal of Gastroenterology
American Journal of Medicine
American Journal of Psychiatry
American Journal of Public Health
American Journal of Respiratory and Critical Care Medicine
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Pediatrics

Radiology
Respiratory Medicine
Science
Sleep
The Laryngoscope Journal
Thorax

STANDARD ABBREVIATIONS

The following terms are abbreviated in this edition: acquired immunodeficiency syndrome (AIDS), cardiopulmonary resuscitation (CPR), central nervous system (CNS), cerebrospinal fluid (CSF), computed tomography (CT), deoxyribonucleic acid (DNA), electrocardiography (ECG), health maintenance organization (HMO), human immunodeficiency virus (HIV), intensive care unit (ICU), intramuscular (IM), intravenous (IV), magnetic resonance (MR) imaging (MRI), ribonucleic acid (RNA), and ultrasound (US).

NOTE

The YEAR BOOK OF PULMONARY DISEASE is a literature survey service providing abstracts of articles published in the professional literature. Every effort is made to assure the accuracy of the information presented in these pages. Neither the editors nor the publisher of the YEAR BOOK OF PULMONARY DISEASE can be responsible for errors in the original materials. The editors' comments are their own opinions. Mention of specific products within this publication does not constitute endorsement.

To facilitate the use of the YEAR BOOK OF PULMONARY DISEASE as a reference tool, all illustrations and tables included in this publication are now identified as they appear in the original article. This change is meant to help the reader recognize that any illustration or table appearing in the YEAR BOOK OF PULMONARY DISEASE may be only one of many in the original article. For this reason, figure and table numbers will often appear to be out of sequence within the YEAR BOOK OF PULMONARY DISEASE.

Publisher's Preface

The publication of the 2001 YEAR BOOK series marks the 100th anniversary of the original Practical Medicine Series of Year Books. To commemorate this milestone, each 2001 Year Book includes an anniversary seal on the cover. The content and format of the Year Books remains unchanged from the beginning of the last century—each volume consists of abstracts of the best scholarly articles of the year, accompanied by expert critical commentaries.

The first Year Book appeared in 1900 when Gustavus P. Head, MD, produced the first *Year Book of the Nose, Throat and Ear*, a volume consisting of highlights from the previous year's best literature, enhanced by expert observations. Dr Head assembled a small group of distinguished physicians to serve as editors, and the first series of Year Books was published in 1901. The first volumes of the Year Book series—*General Medicine*, *General Surgery*, *The Eye*, *Gynecology*, *Obstetrics*, *Materia Medica and Therapeutics*, *Pediatrics*, *Physiology*, and *Skin and Venereal Diseases*—appeared at monthly intervals, with 10 volumes published in 1 year. The entire series was met with critical enthusiasm.

In 1904, Dr Head's brother, Cloyd, assumed responsibility for the management of the Year Books. In 1905, the volumes began to appear at regular intervals during the calendar year instead of on a monthly basis. By World War I, the Year Books had been established as an authority on medical and surgical progress.

The postwar period brought about a significant change in the practice of medicine: specialization. To accommodate the rise of specialization in medicine, the Year Books were now sold as individual volumes rather than only as a complete set. This change brought about a tremendous response and sales of the books increased. In 1922, the Year Books became even more specialized, as the books now had different editors for the different medical specialties covered in each volume. Later, in 1933, the title of the series changed from the Practical Medicine Series of Year Books to the Practical Medicine Year Books to reflect these new designs.

The Year Books have grown significantly from the first 10-volume series in 1901 to a diversified series of 32 volumes in 2001. That the Year Book series is the only series of its kind to have survived is a testament to the vision and commitment of its founders. Some minor changes in format and design have occurred throughout the years, but the mission of the Year Book series—to provide a record of exceptional medical achievements distinguished by the reflections of many of the great names in medicine today—has remained constant.

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1 Asthma

Introduction

Asthma is characterized by chronic inflammation of the airways associated with airflow obstruction (sometimes, but not always, reversible) and a heightened sensitivity to both allergic and nonallergic triggers (airway hyperreactivity). Asthma causes significant morbidity and mortality in the United States and affects more than 17 million people.¹ The leading chronic illness in children and the fourth leading cause of disability in children, asthma results in 10 million lost school days and 3 million lost workdays each year. Despite our improved understanding of the complex pathophysiology of asthma, we still have not been able to reverse the trends of increased morbidity and mortality caused by this disease.

In recent years, we have developed a better understanding of the many factors which lead to the development of asthma in early life. Several articles have discussed the role of *respiratory syncytial virus*, which can lead to the development of asthma in early life, an effect that may wane later in adolescence.² A variety of prenatal and postnatal factors and exposures interact to either protect or promote the development of asthma. The “hygiene hypothesis” may partly explain why we are seeing a recent increase in the incidence of asthma and allergies. This hypothesis, as discussed in the article by Matricardi et al (Abstract 1–4), suggests that as our ability to prevent infections in early life improves, we may actually be contributing to the increase of atopic diseases.³ Unfortunately, very few advances in the genetics of asthma have been made and we still have not been able to identify the gene or genes that cause asthma.

Once asthma has developed, a complex number of events occur that perpetuate the disease and lead to subsequent flare-ups. A variety of cellular mediators and messengers interact to lead the inflammatory response seen in asthma. The mechanism of how corticosteroids modify this response is being elucidated as discussed in several articles in this review. However, there are a small group of patients with asthma for which corticosteroids are not effective. Wenzel et al provides some helpful insights into separating these patient’s inflammatory response into eosinophil rich or poor.⁴ Future studies are needed to assess whether this classification is helpful in directing therapy.

The recently updated National Asthma Education and Prevention Program Expert Panel II guidelines provides a standard of asthma care that clinicians can utilize.⁵ Many have argued that these guidelines are still too

complex for physicians, especially those in primary care, to implement in busy clinical practices. Furthermore, studies such as the one by Colice et al (Abstract 1-17), point out that the guidelines are not perfect and certain variables, such as nocturnal awakenings caused by asthma, may result in the overclassification of asthma as severe persistent.⁶ Despite these limitations, the guidelines do encourage appropriate antiinflammatory medications, which are still being underutilized in asthma.

In the past year, advances have been made in combining and developing new agents for the treatment of asthma. The combination of bronchodilators, albuterol, and ipratropium bromide is useful in the initial treatment of acute exacerbation of asthma in the emergency department or hospital. For long-term management, the combination of inhaled corticosteroids and the long-acting bronchodilators fluticasone and salmeterol will simplify our treatment of persistent asthma that requires both agents. The role of leukotriene antagonists in "sparing" the dose of inhaled corticosteroids is further defined in this review. Lastly, agents such as monoclonal anti-IgE antibody and interleukin-4 receptor blocker, will hopefully provide additional useful treatments for those difficult to control asthmatics who do not respond to conventional therapy.

Lastly, the role of bacterial resistance in cystic fibrosis has been reviewed in several new articles. There are no new treatment options in cystic fibrosis but, overall, the prognosis continues to improve for these patients as we better understand the different genetic mutations responsible for cystic fibrosis and the optimal approach to its treatment.

In the study of asthma and cystic fibrosis, important advances have been made. New concepts have emerged in the development of asthma and morbidity caused by cystic fibrosis. Fortunately, the therapeutic armamentarium for the treatment of these diseases continues to advance. This review will keep you abreast of those developments for your practice.

Mario Castro, MD, MPH

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