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# YEAR BOOK®

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## YEAR BOOK OF GASTROENTEROLOGY™

2001

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YEAR BOOK  
**100**  
CENTENNIAL  
years of excellence

2001

# The Year Book of GASTROENTEROLOGY™

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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.

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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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## 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.

American Journal of Clinical Pathology  
American Journal of Emergency Medicine  
American Journal of Gastroenterology  
American Journal of Physiology  
American Journal of Roentgenology  
American Journal of Surgery  
American Surgeon  
Annals of Internal Medicine  
Annals of Plastic Surgery  
Annals of Surgery  
Annals of Thoracic Surgery  
Annals of the Royal College of Surgeons of England  
Archives of Pediatrics and Adolescent Medicine  
Archives of Surgery  
British Journal of Surgery  
British Medical Journal  
Cancer  
Chest  
Clinical Radiology  
Critical Care Medicine  
Digestion  
Digestive Diseases and Sciences  
Diseases of the Colon and Rectum  
European Journal of Pain  
European Journal of Surgery  
Gastroenterology  
Gastrointestinal Endoscopy  
Gut  
Head and Neck  
Hepatology  
Intensive Care Medicine  
Journal of Clinical Endocrinology and Metabolism  
Journal of Clinical Pathology  
Journal of Pathology  
Journal of Pediatric Gastroenterology and Nutrition  
Journal of Pediatric Surgery  
Journal of Pediatrics  
Journal of Surgical Oncology  
Journal of Surgical Research  
Journal of Trauma: Injury, Infection, and Critical Care  
Journal of the American College of Surgeons  
Journal of the American Medical Association  
Lancet  
Mayo Clinic Proceedings  
New England Journal of Medicine  
Orthopedics  
Otolaryngology - Head and Neck Surgery

Radiology  
Respiratory Medicine  
Surgery  
Transplantation  
Western Journal of Medicine  
World Journal of Surgery

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#### 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).

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#### NOTE

The YEAR BOOK OF GASTROENTEROLOGY 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 GASTROENTEROLOGY 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 GASTROENTEROLOGY 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 GASTROENTEROLOGY 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 GASTROENTEROLOGY.

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## 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 remain 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 their 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 Esophageal and GI Motility Disorders

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## Introduction

This year has brought tremendous advancement in the fields of esophageal disease and gastrointestinal motility. A specific chromosomal abnormality has been described in pediatric reflux, and now we are told that it is all right to push a foreign body into the stomach! Long-term studies continue to demonstrate the efficacy and safety of proton pump inhibitors, and laser ablation for Barrett's esophagus is faltering. Below the diaphragm, valuable new insights into dyspepsia, irritable bowel syndrome, and constipation have been made. We continue to try to sort out the highly difficult area of pelvic floor dysfunction and its contribution to evacuation disorders.

David A. Katzka, MD

## Esophagus

### ACHALASIA

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#### **A Cost-Minimization Analysis of Alternative Treatment Strategies for Achalasia**

Imperiale TF, O'Connor JB, Vaezi MF, et al (Indiana Univ, Indianapolis; Duke Univ, Durham, NC; The Cleveland Clinic Found, Ohio)

*Am J Gastroenterol* 95:2737-2745, 2000

1-1

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**Background.**—The best treatment for achalasia has not been established. The costs of different strategies for treating this condition were reported.

**Methods.**—A cost-minimization model incorporated laparoscopic Heller myotomy with fundoplication (LHM); pneumatic dilation (PD) with LHM reserved for treatment failures; and botulinum toxin (Botox) injection of the lower esophageal sphincter with PD reserved for treatment failures.

**Findings.**—Costs per cure were \$3111 for PD, \$3723 for Botox, and \$10,792 for LHM. The short- and long-term efficacies of LHM were 96% and 94%, respectively, yet this treatment was most expensive. Initial PD

was less expensive than initial Botox as long as the rates of PD efficacy and perforation were 70% or greater and less than 9.5%, respectively, and the cost of a Botox session was \$4.50 or lower.

**Conclusions.**—For otherwise healthy patients with achalasia, initial PD is least expensive, provided the PD perforation rate is less than 10%. Initial Botox is less expensive only when costs not related to endoscopy decrease by 25%. Initial LHM is most expensive.

► One of the great debates in esophagology now concerns whether PD or LHM should be the primary treatment of achalasia in an otherwise healthy young person and whether there is a role for Botox as a primary treatment. Those who favor dilation point out that it is much easier, that in some patients it may last many years, and that, with current methods (for example, keeping balloon inflation pressures below 10 psi), the chance of perforation is small. Proponents of myotomy point out that in young persons PD is more likely to fail and that the few long-term studies directly comparing the 2 methods favor surgery. This study analyzes the 2 from a cost-effectiveness approach using a cost-minimization model over a projected 5 years, and also looks at Botox. PD and Botox injection are demonstrated by the authors as far less expensive (about one third the cost), even accounting for relapses and repeat procedures, based on published efficacy rates for these procedures. Whether these data should be taken into account in your decision making is another issue. The main problem, however, is that when making this decision for a 30-year-old, we are interested in the 50-year outcome and not the 5-year outcome. How well laparoscopic surgical fundoplication holds up that long, let alone 10 years, is not known. At this point, I think either procedure is acceptable. I am not a proponent of Botox in healthy young persons with achalasia, but this is open to debate as well and is used by several leaders in the field.

D. A. Katzka, MD

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### **Videoscopic Heller Myotomy for Achalasia—Results Beyond Short-term Follow-up**

Bloomston M, Boyce W, Mamel J, et al (Univ of South Florida, Tampa)  
*J Surg Res* 92:150-156, 2000

1-2

**Background.**—Heller myotomy has long been used to treat achalasia that is unresponsive to nonoperative management. Videoscopy reportedly reduces the morbidity associated with Heller myotomy. However, few researchers have reported outcomes more than 1 year after videoscopic Heller myotomy.

**Methods and Findings.**—Seventy-eight patients with achalasia documented by barium esophogram and esophageal manometry underwent videoscopic Heller myotomy beginning in 1992. The patients' ages ranged from 14 to 91 years. Sixty-two percent had had pneumatic dilation before surgical consultation. Fifty-four percent had previously had Botox injection.

tions. Before myotomy, all reported dysphagia, and 40% reported symptoms of heartburn. After myotomy, 91% of the patients said that their swallowing had improved. Eighteen percent still experienced heartburn once a week. The mean length of hospitalization was 2 days, with 72% of the patients spending 2 days or less in the hospital. Major complications occurred in 7.7% of the patients; these included 5 esophageal perforations and 1 enterotomy without long-term sequelae. Three procedures required conversion to open procedures. None of the patients died.

**Conclusions.**—Videoscopic Heller myotomy appears to be safe and effective in the treatment of achalasia, with low morbidity and mortality rates. This procedure provides relief beyond the short term.

► Laparoscopic Heller myotomy was performed in 78 patients, with follow-up of almost 2 years. Endoscopic assistance to guide the length of the myotomy (a place for the gastroenterologist!) was used. Eight patients also underwent fundoplication (how they were chosen is unclear). Only 3 patients required conversion to an open procedure. Overall, the results were good (71% excellent), but still almost 10% of the patients reported poor results. There was an average of 4 ICU days per patient because of complications. Note, though, a strong learning curve as suggested by the fact that the average ICU stay was 6 days for the first 25 patients and 1.3 for the last 28. Altogether, I think these data point out that, similar to what has been previously shown, laparoscopic myotomy by an experienced surgeon who has performed at least 25 myotomies is a first-line therapy for achalasia. Whether it is the first-line therapy is still under debate. It is still also unclear whether fundoplication should be performed (and if not in all, then in whom), given the probable underestimate of reflux that occurs after myotomy (as well as dilation!).

D. A. Katzka, MD

## FOOD IMPACTION

### **Esophageal Food Impaction: Epidemiology and Therapy: A Retrospective, Observational Study**

Longstreth GF, Longstreth KJ, Yao JF (Kaiser Permanente Med Care Program, San Diego, Calif)

*Gastrointest Endosc* 53:193-198, 2001

1-3

**Introduction.**—Esophageal food impaction is a common medical emergency. Incidence data are not available, and management is controversial. Adult members of a large health maintenance organization who underwent endoscopic therapy for esophageal food impaction from 1993 to 1998 were evaluated retrospectively to determine epidemiology and endoscopic findings.

**Methods.**—One hundred ninety-four patients were treated for 223 episodes of esophageal food impaction. Of these, the status of 192 (99%) was followed for a median of 31 months (range, 1-72 months) after disimpaction.



TABLE 2.—Final Diagnosis in 194 Patients With Esophageal Food Impaction

	Number (Percent)
Schatzki's ring	84 (43)
Peptic stricture	67 (35)
Hiatal hernia only	7 (4)
Miscellaneous*	13 (7)
No abnormality	23 (12)
Total	194

\*Multiple esophageal webs, 4; postoperative stricture, 3; radiation stricture, 1; cervical web, 1; hiatal hernia and esophagitis, 1; esophageal squamous carcinoma, 1; esophageal adenocarcinoma, 1; non-specific dysmotility, 1.

(Courtesy of Longstreth GF, Longstreth KF, Yao JF: Esophageal food impaction: epidemiology and therapy: A retrospective, observational study. *Gastrointest Endosc* 53:193-198, 2001.)

**Results.**—The estimated annual incidence rate for this cohort was 13.0 episodes per 100,000. Some type of meat was the bolus in 189 occurrences (85% of the total and 92% of the 206 with a specified food type). Various other foods were involved. In 4 occurrences (2%), initial flexible esophagoscopy was followed by hospitalization; disimpaction was performed under general anesthesia by a head and neck surgeon using a rigid esophagoscope. In patients successfully managed by flexible esophagoscopy, immediate postdisimpaction dilation was achieved with Maloney bougies (76%), Savary bougies over a guidewire (1%), and balloons (2%). Complications included small distal esophageal lacerations with oozing blood in 3 patients (1%); each had been treated by pushing a bolus into the stomach, and 1 had undergone immediate stricture dilation. Important changes in diagnosis were from a peptic stricture, hiatal hernia only, or no abnormality to a Schatzki's ring in 5 patients, and from a Schatzki's ring or hiatal hernia only to a peptic stricture in 5 patients (Table 2). Median age was 74 in patients who used dentures and 51 in those who did not. The differences were significant by the Wilcoxon rank sum test ( $P = .0001$ ).

**Conclusion.**—Esophageal food impaction is a common occurrence. It almost always may be treated safely with flexible esophagoscopy, usually using the push technique.

**Outcomes of Acute Esophageal Food Impaction: Success of the Push Technique**

Vicari JJ, Johanson JF, Frakes JT (Rockford Gastroenterology Associates Ltd, Ill; Univ of Illinois, Rockford)  
*Gastrointest Endosc* 53:178-181, 2001

1-4

**Introduction.**—The push technique has not been recommended historically because of the high rate of esophageal pathology in patients with acute esophageal food impaction (AEFI). A series of patients was treated for AEFI using the push technique.