# Key References in Gastroenterology

AN ANNOTATED GUIDE

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# Foreword

Virtually all physicians are keenly aware of the enormous amount of new biomedical information that becomes available each year—information that has to be assimilated into a constantly changing data base. This is particularly applicable to the field of internal medicine and its subspecialties such as gastroenterology. The need to distill and disseminate such information has resulted in the publication of a seemingly endless flow of new journals, textbooks, updates, tapes, and continuing medical education courses. Despite the voluminous literature, physicians—especially practicing physicians—have considerable difficulty in locating those articles that will aid them in their daily practice of internal medicine. The plethora of published material is often found to be unmanageable. Thus, there is a clear-cut need for a text that provides ready access to key articles of special significance to clinicians who are too busy to do their own search of the recent literature for the information they need.

*Key References in Gastroenterology* is an important new book that addresses this problem of accessing the literature directly. The organization of this book by organ system, as well as by specific disease categories, permits the busy practicing physician to locate easily pertinent articles that he may need in order to upgrade the quality of his diagnostic and therapeutic efforts in daily patient care. The authors have distilled an enormous amount of information into a concise, readable text. Most importantly, it appears to me that *Key References in Gastroenterology* will prove especially useful to the two physician groups most pressed for time and yet most in need of current articles that review a specific topic or answer a precise question: the housestaff and clinicians in front-line, primary care practice.

Norton J. Greenberger, M.D.

# Preface

The sad truth is that most of us have been buried by the tremendous volume of medical literature published in recent years—even those of us who make a serious effort to keep up in just a single medical subspecialty. Finding one or two pertinent studies or a good review of a particular topic may involve hours of library sifting, with increasing frustration and an enlarging pile of discarded articles.

The idea for this text came from a "little black book" that we first developed while we were fellows in the Gastrointestinal Unit at Massachusetts General Hospital. This book contained annotated entries, organized by topic, of key articles in gastroenterology. It was frequently updated, and care was taken to include only articles of clinical relevance or special significance. As such, the material it contained was screened and was thus available to housestaff and practicing physicians in a form that emphasized practical, to-the-point utility.

*Key References in Gastroenterology* is an outgrowth and expansion of our original "little black consult book." It is intended for quick reference to give the practitioner some idea of the results of important, landmark studies that address specific questions in gastroenterology or to refer the clinician to a particularly well-written, pertinent review article. At the very least, the book should provide immediate access to the often bewildering array of journal articles locked away in the medical library. Our hope is that this volume will not join the many unweildy, massive reference texts that gather dust on the office bookshelf. It would be gratifying to see it well-thumbed and dog-eared from daily use.

Numerous individuals have contributed thoughts, ideas, and time to this book. We would especially like to thank Cheryl Flekier, Hilda Gardner, Mimi Kindelmann, and Juanita Stika for their help in the preparation of the manuscript; Drs. Perry Blackshear, Michael Finck, and Norton Greenberger for their professional and technical assistance; and Lewis Reines of Churchill Livingstone for his advice and encouragement.

Mark S. McPhee, M.D.
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Hepatitis B
Non-A, Non-B Hepatitis and Post-transfusion Hepatitis
Hepatitis Prophylaxis
Fulminant Hepatitis
Acute Alcoholic Hepatitis
Drug-Induced Hepatitis
Granulomatous Hepatitis
Chronic Hepatitis
Cirrhosis
Portal Hypertension, Varices and Shunts
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Neoplasms of the Liver
Budd-Chiari Syndrome
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Liver Transplantation
Other Diseases of the Liver

# ESOPHAGUS

## General

**Goyal RK and Rattan S: Neurohumoral, hormonal, and drug receptors for the lower esophageal sphincter.** ***Gastroenterology*****, 74:598–619, 1978.**

A thorough review of the complex physiology and pharmacology of the lower esophageal sphincter from the viewpoint of studies characterizing receptors for drugs, hormones and neurohumoral transmitters. 282 refs.

**Price S and Castell DO: Esophageal mythology.** ***JAMA*****, 240:44–46, 1978.**

A concise review of evidence contradicting 6 commonly held clinical misconceptions of esophageal disease. 16 refs.

## Achalasia and Disorders of Esophageal Motility

**Cohen S: Motor disorders of the esophagus.** ***N Engl J Med*****, 301:184–192, 1979.**

The author reviews recent progress in the classification, pathophysiology and treatment of the major esophageal motor disorders. 12 refs.

**Kilman WJ and Goyal RK: Disorders of pharyngeal and upper esophageal sphincter motor function.** ***Arch Intern Med,*** **136:592–601, 1976.**

The authors review the pathogenesis, diagnosis and treatment of motor disorders of buccopharyngeal and cricopharyngeal swallowing. Included also is a section on selected neurologic and neuromuscular conditions associated with buccopharyngeal dysphagia. 106 refs.

**Castell DO: Achalasia and diffuse esophageal spasm.** ***Arch Intern Med,*** **136:571–579, 1976.**

The author reviews the pathogensis, pathophysiology, clinical features, diagnosis and treatment of esophageal spasm and achalasia. 67 refs.

**Brand DL, Martin D and Pope CE II: Esophageal manometrics in patients with angina-like chest pain.** ***Am J Dig Dis,*** **22:300–304, 1977.**

Manometric testing was performed in 58 patients with angina-like chest pain, 43 of 58 having no evidence of coronary artery disease during the period of testing and follow-up. On the basis of abnormal manometry, 13 of 43 patients without coronary disease and 6 of 15 patients with evidence for coronary disease were presumed to have esophageal related pain. Only 3 of 13 in the noncoronary disease group met criteria for diffuse esophageal spasm, the majority (10 of 13) having either increased amplitude (9 of 13) or increased duration (1 of 13) of contractions. 13 refs.

**Swamy N: Esophageal spasm: Clinical and manometric response to nitroglycerine and long acting nitrates.** ***Gastroenterology,*** **72:23–27, 1977.**

The author studied the effect of nitrates on clinical symptoms and serial esophageal manometric studies in 8 controls and 12 patients with esophageal spasm. In the group with documented spasm, 5 of 12 had no evidence of gastroesophageal reflux and showed a uniformly good response to long-term nitrate management, while in the group with documented reflux and spasm 7 of 12 patients failed to demonstrate a predictably beneficial response. 10 refs.

**Ali Kahn T, Schragge BW, Crispin JS and Lind JF: Esophageal motility in the elderly.** ***Am J Dig Dis,*** **22:1,049–1,054, 1977.**

Manometric studies in 49 asymptomatic subjects over 60 years of age and 43 subjects under 40 showed significant differences in the lower esophageal sphincter response to deglutition, in the amplitude and rate of progression of peristaltic contrac-

tions, in the incidence of disordered contractions and in the occurrence of spontaneous gastroesophageal reflux. The authors conclude that recognition of age related changes is important in the interpretation of esophageal motility patterns. 15 refs.

**Vantrappen G and Hellemans J: Treatment of achalasia and related motor disorders. *Gastroenterology*, 79:144–154, 1980.**
A comprehensive review of the literature dealing with therapeutic techniques and results in the treatment of achalasia, including the authors' own extensive experience. Conclusions are that pneumatic dilatation of the lesion is the therapeutic intervention of choice in most patients with achalasia. Heller myotomy or an alternative surgical procedure is preferred in the following clinical situations: 1) after several unsuccessful attempts at pneumatic dilatation, 2) when esophageal carcinoma cannot be excluded, 3) in children and psychotic patients unable to cooperate with dilatation and 4) possibly in those patients with diverticula of the distal esophagus. 105 refs.

**Castell DO: The spectrum of esophageal motility disorders. *Gastroenterology*, 76:639–640, 1979.**
A concise perspective editorial in which the author comments upon a paper by Vantrappen, et al. (*Gastroenterology*, 76:450–457, 1979) and other studies which support the concept of esophageal motor disorders as a spectrum of disease with classical achalasia and diffuse esophageal spasm at either end and a series of interrelated, overlapping, unclassified abnormalities of motility between. 7 refs.

## Hiatus Hernia and Gastroesophageal Reflux

**Dodds WJ, Hogan WJ and Miller WN: Reflux esophagitis. *Am J Dig Dis*, 21:49–67, 1976.**
A comprehensive review of the pathophysiology, diagnosis and treatment of gastroesophageal reflux. 219 refs.

**Pope CE II: Pathophysiology and diagnosis of reflux esophagitis. *Gastroenterology*, 70:445–454, 1976.**
The author reviews the physiology and pathophysiology of the lower esophageal sphincter, the mucosal response to reflux and approaches to the diagnosis of reflux esophagitis. 115 refs.

**Behar J, Biancani P, and Sheahan DG: Evaluation of esophageal tests in the diagnosis of reflux esophagitis. *Gastroenterology*, 71:9–15, 1976.**

The authors studied the sensitivity and specificity of 5 tests used in the diagnosis of reflux esophagitis (acid infusion test, esophagoscopy, esophageal biopsies, manometry and esophageal pH study). Tested were 90 patients with chronic symptoms of reflux and/or documented esophagitis, 11 patients with chronic chest pain and 34 controls without GI symptoms or with uncomplicated duodenal ulcer. The most sensitive and specific test combination for establishing a diagnosis of reflux esophagitis was esophageal pH study after hydrochloric acid infusion plus esophageal biopsy. 26 refs.

**Behar J, Brand DL, Brown FC et al.: Cimetidine in the treatment of symptomatic gastroesophageal reflux. *Gastroenterology*, 74:441–448, 1978.**

A double-blind, controlled, multicenter clinical trial involving 94 patients with chronic gastroesophageal reflux treated for 8 weeks with either standard doses of cimetidine or placebo. Significant decrease in serially assessed frequency and severity of symptoms, including decreased antacid use, was noted in the cimetidine group. No objective improvement, however, was noted in endoscopic appearance of the esophagus or in sphincter pressures. The authors conclude that cimetidine is more effective than placebo for symptomatic relief of gastroesophageal reflux. 23 refs.

**McCallum RW, Ippoliti AF, Cooney C and Sturdevant RAL: A controlled trial of metoclopramide in symptomatic gastroesophageal reflux. *N Engl J Med*, 296:354–357, 1977.**

The authors studied 31 patients with symptoms of chronic heartburn in a randomized, double-blind crossover trial of two 8-week periods comparing metoclopramide at a dose of 10 mg 4 times daily with placebo. Metoclopramide-treated patients showed significantly more symptomatic improvement and a lower daily antacid intake than placebo controls. The response of lower esophageal sphincter pressure to metoclopramide did not correlate significantly with improvement in symptoms. 38 refs.

**Farrell RL, Roling GT and Castell DO: Cholinergic therapy of chronic heartburn. *Ann Intern Med*, 80:573–576, 1974.**

A randomized, double-blind, controlled, 8-month crossover study of bethanechol, 25 mg 4 times daily, versus placebo in 20 patients with chronic heartburn refractory to therapy. There was significant improvement in symptomatology and decreased antacid use in the bethanechol group. The authors conclude that bethanechol may be useful in the therapy of chronic heartburn. 9 refs.

**Demeester TR, Johnson LF and Kent AH: Evaluation of current operations for the prevention of gastroesophageal reflux.** ***Ann Surg*****, 180:511–525, 1974.**

A prospective, randomized study of 45 patients with documented gastroesophageal reflux poorly responsive to medical treatment in which Hill, Nissen and Belsey Mark IV antireflux procedures were performed on 15 patients each. Symptomatology was improved postsurgically in all patients. The Nissen procedure was most effective in preventing objective postsurgical evidence of reflux, but patients having the Nissen repair experienced a high incidence of postoperative dysphagia and a 50 percent incidence of inability to vomit. Postsurgical complications were highest in the Belsey (transthoracic) repair group. The authors recommend the Nissen fundoplication as the procedure of first choice in the surgical therapy of gastroesophageal reflux. 23 refs.

**Welch CE and Malt RA: Abdominal surgery (first of three parts).** ***N Engl J Med*****, 300:648–653, 1979.**

This article contains a concise but thorough review of important advances reported over the past 3 years in the surgical approach to hiatus hernia and gastroesophageal reflux. The authors conclude by advocating the Hill operation as the primary procedure of choice. 71 refs. (11 refs. relating to esophageal disease).

**Brand DL, Eastwood IR, Martin D et al.: Esophageal symptoms, manometry, and histology before and after anti-reflux surgery.** ***Gastroenterology*****, 76:1,393–1,401, 1979.**

The authors studied 25 patients (no controls) with documented gastroesophageal reflux preoperatively and at 8 months and 69 months (13 of 25 patients) post Allison, Hill or Nissen antireflux surgery. Though only 2 of 13 patients had noted recurrence of symptoms at the 69 month follow-up interval, significant decreases in mean LES pressures and deterioration in objective measures of reflux (4/9) and esophageal biopsies (5/8) were noted in patients who had been normal at 8 months. 30 refs.

## Strictures and Foreign Bodies of the Esophagus

**Castell DO, Knuff TE, Brown FC et al.: Dysphagia.** ***Gastroenterology*****, 76:1,015–1,024, 1979.**

In this clinical conference, the case presentation of a patient with dysphagia is followed by a review of the differential diagnosis of dysphagia, reflux esophageal injury, Barrett's

esophagus, peptic stricture and esophageal carcinoma. Diagnostic approaches and medical and surgical treatment are discussed. 49 refs.

**Lanza FL and Graham DY: Bougienage is effective therapy for most benign esophageal strictures. *JAMA*, 240:844–847, 1978.**
The authors report experience with bougienage followed by institution of a medical antireflux program in 52 patients with mild and 40 patients with severe benign esophageal stricture. Over the period of follow-up, 72 of 92 required 2 or fewer subsequent dilations, while only 9 patients required 5 or more dilations and only 3 of the 9 underwent surgical repair. The authors conclude that dilation followed by medical antiflux program should be the primary therapy for most patients with peptic stenosis of the esophagus. 18 refs.

**Larrain A, Csendes A and Pope CE II: Surgical correction of reflux. An effective therapy for esophageal strictures. *Gastroenterology*, 69:578–583, 1975.**
Hill repair with cardiac calibration was performed in 24 patients without intraoperative or postoperative dilation. Dysphagia and other symptoms disappeared in nearly all patients postoperatively and lumen diameter through the strictures increased from a mean of 6.3 mm to 13 mm postoperatively on radiographic assessment. Objective evaluation of sphincter pressures and esophagitis improved. The authors conclude that an adequate antireflux operation is effective therapy in peptic stricture of the esophagus and should obviate the need for postoperative dilations or interposition surgery in most cases. 14 refs.

**Campbell GS, Burnett HF, Ransom JM and Williams GD: Treatment of corrosive burns of the esophagus. *Arch Surg*, 112:495–500, 1977.**
The authors detail their experience (uncontrolled) in the management of 40 patients with caustic ingestions. Early diagnostic esophagoscopy to the uppermost level of burn injury, string swallowing and corticosteroid and antibiotic therapy without nasogastric intubation or early bougienage are recommended. The development and management of subsequent caustic strictures of the esophagus are discussed. 21 refs.

**McCaffery TD and Lilly JO: The management of foreign affairs of the GI tract. *Am J Dig Dis*, 20:121–126, 1975.**
2 cases of foreign body ingestion are presented and a technique for extraction of impacted objects in the upper GI tract using a flexible fiberoptic endoscope and polypectomy snare is de-

scribed. The authors review the approach to management of foreign body ingestions. 22 refs.

## Infectious Diseases of the Esophagus

**Howler W. and Goldberg HI: Gastroesophageal involvement in Herpes simplex. *Gastroenterology*, 70:775–778, 1976.**
A case of disseminated *Herpes simplex* involving both esophagus and gastric mucosa in an immunocompromised host is presented and discussed. Endoscopic, radiographic and pathologic features are reviewed. 17 refs.

**Springer DJ, DaCosta LR and Beck IT: A syndrome of acute self-limiting ulcerative esophagitis in young adults probably due to Herpes simplex virus. *Dig Dis Sci*, 24:535–539, 1979.**
The authors describe 5 cases of acute ulcerative esophagitis in healthy young adults. *Herpes simplex* virus was demonstrated in 2 of 5 and 1 of 5 had appropriate change in viral titer. The remaining 2 patients had histories and endoscopic findings highly suggestive of *Herpes esophagitis*. The authors suggest that *Herpes simplex* esophagitis be considered in the differential diagnosis of patients presenting with acute odynophagia, whether or not underlying immunologic deficiency states exist. 21 refs.

**Kodsi BE, Wickremesinghe PC, Kozinn PJ et al.: Candida esophagitis. A prospective study of 27 cases. *Gastroenterology*, 71:715–719, 1976.**
The authors describe their experience with *Candida* esophagitis and cite endoscopic appearance, stained direct smears and presence of serum *Candida* agglutinin titer of at least 1:160 as the most valuable tests for establishing the diagnosis. Therapy with oral nystatin was recommended, with 4 patients receiving supplementary flucytosine therapy for persistent symptoms. 14 refs.

**Rutgeerts L and Verhaegen H: Intravenous miconazole in the treatment of chronic esophageal candidiasis. *Gastroenterology*, 72:316–318, 1977. Tytgat GN, Surachno S, de Groot WP and Schellekens PT: A case of chronic oropharyngo-esophageal candidiasis with immunological deficiency: Successful treatment with miconazole. *Gastroenterology*, 72:536–540, 1977.**
2 papers describing treatment success with the antifungal agent miconazole (orally or intravenously) in patients with chronic, recurrent esophageal candidiasis refractory to other therapy. 16 refs. and 9 refs.

## Esophageal Rupture and the Mallory-Weiss Syndrome

**Graham DY and Schwartz JT: The spectrum of the Mallory-Weiss tear. *Medicine*, 57:307–318, 1978.**

The authors report 93 cases of Mallory-Weiss tear with hematemesis as the presenting complaint in 85 percent. Only 29 percent, however, gave a classical history of vomiting, coughing or retching prior to hematemesis. In 35 percent, an additional gastroesophageal lesion was seen at endoscopy (bleeding in 15 percent). In this series, 73 of 93 patients stopped bleeding spontaneously, 5 rebled, 16 required systemic vasopressin or electrocautery and 11 went to surgery. The incidence of Mallory-Weiss tear in patients presenting with upper gastrointestinal bleeding was 14 percent, and the mortality was 9 percent. 34 refs.

**Knauer CM: Mallory-Weiss syndrome. *Gastroenterology*, 71:5–8, 1976.**

In this series, 75 Mallory-Weiss lacerations were seen endoscopically in 58 of 528 patients evaluated for acute upper gastrointestinal bleeding. The majority of the patients had other gastric or esophageal lesions, often associated with a history of alcohol and/or aspirin ingestion. The author reviews the diagnosis and management of the Mallory-Weiss syndrome. 16 refs.

**Watts HD: Lesions brought on by vomiting: The effect of hiatus hernia on the site of injury. *Gastroenterology*, 71:683–688, 1976.**

From a review of published cases, the author concludes that Mallory-Weiss tears of the gastric cardia are commonly associated with hiatus hernia, while those tears occurring in the distal esophagus as well as cases of Boerhaave esophageal rupture are only rarely associated with hiatus hernia. The author postulates that the severity of postemetic gastroesophageal lesions is probably determined by the magnitude of the transmitted force from abdomen to chest and the location of the resulting lesions by the presence or absence of hiatus hernia. 55 refs.

**Symbas PN, Hatcher CR and Harlaftis N: Spontaneous rupture of the esophagus. *Ann Surg*, 187:634–640, 1978.**

The authors review their experience with 9 patients having surgical repair of esophageal rupture, 5 of 9 constituting late intervention with operation occurring between 20 and 76 hours following rupture. The authors advocate primary surgical repair of the esophagus along with antibiotic treatment, me-