

Gastroparesis Incidence and Natural History

To determine the incidence, prevalence and outcome of gastroparesis in the community, the Rochester Epidemiology Project was utilized, representing a medical records linkage system in Olmstead County, Minnesota. County residents with potential gastroparesis were identified. The complete medical records were reviewed by a gastroenterologist. Three diagnostic definitions were utilized: (1) Definite gastroparesis, including delayed gastric emptying by standard scintigraphy and typical symptoms for more than three months, (2) probable gastroparesis, typical symptoms of food retention on endoscopy or upper gastrointestinal study, (3) possible gastroparesis, typical symptoms alone for delayed gastric emptying by scintigraphy without gastrointestinal symptoms.

Poisson regression was used to assess the association of incidence rates with age, sex and calendar period.

Among 3,604 potential cases of gastroparesis, 83 met diagnostic criteria for definite gastroparesis, 127 for probable gastroparesis and 222 had any of the three definitions with gastroparesis. The age-adjusted incidence per 100,000 person/years of definite gastroparesis for the years 1996 to 2006 was 2.4 for men and 9.8 for women. The age-adjusted prevalence of definite gastroparesis per 100,000 persons on 1/1/2007 was 9.6 for men and 37.8 for women. Overall survival was significantly lower than the age and sex specified expected survival computed from the Minnesota white population.

It was concluded that gastroparesis is an uncommon condition in the community, but is associated with a poor outcome. (Jung, H., Choung, R., Locke, G., et al. "The Incidence, Prevalence and Outcome of Patients with Gastroparesis in Olmstead County, Minnesota From 1996 to 2006." *Gastroenterology*, 2009; Vol. 136: 1225-1233.)

Hyperglycemia, *Helicobacter Pylori* and Gastric Cancer

This study was performed to evaluate the impact of hemoglobin A1C levels on gastric cancer occurrence and their interaction with *Helicobacter pylori*.

A total of 2,603 Japanese subjects 40 years or older were stratified into four groups, according to

baseline hemoglobin A1C levels—4.9% or less, 5.0 to 5.9%, 6.0 to 6.9% and 7% or greater. They were followed up prospectively for 14 years.

During the follow-up, 97 patients developed gastric cancer. The age and sex-adjusted incidence of gastric cancer is significantly increased in the 6.0 to 6.9% group (5.1 per 1000 person/years), and the 7% or greater group (5.5 per 1000 person/years), compared to the 5.0 to 5.9% group (2.5 per 1000 person/years), whereas it was slightly, but not significantly high in the 4.9% or less group (3.6 per 1000 person/years). The association remains substantially unchanged, even after adjusting for confounding factors, including *Helicobacter pylori* seropositivity (hazard ratio 2.13 for the 6.0 to 6.9% group and 2.69 for the greater than 7% group).

Among subjects who have both high hemoglobin A1C levels (greater than 6%), and *Helicobacter pylori* infection, the risk of gastric cancer was dramatically elevated.

It was concluded that casual hyperglycemia is a risk factor for gastric cancer and is a possible cofactor, increasing the risk posed by *Helicobacter pylori* infection. (Ikeda, S., Doi, Y., Yonemoto, K., et al. "Hyperglycemia Increases the Risk of Gastric Cancer Posed by *Helicobacter Pylori* Infection: A Population-Based Cohort Study." *Gastroenterology*, 2009; Vol. 136: 1234-1241.)

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Alcohol and Cigarette Smoking as Risk Factors for ERCP

Alcohol use and cigarette smoking are associated with various pancreatic diseases. In order to determine whether they are associated with post-ERCP pancreatitis (PEP), a retrospective, case-controlled study to determine if these activities increase the risk for same was carried out.

A total of 7,638 patients who had undergone ERCP in the University of Michigan health system were identified and exclusion criteria was applied to identify 123 with PEP. A total of 308 randomly-selected age and sex stratified controls were utilized in a masked fashion. Data was collected for alcohol use, cigarette smoking, and five internal controls included suspected sphincter of Oddi dysfunction (SOD), pancreatic sphincterotomy, moderate/difficult cannulation, two or more pancreatic injections and pancreatic stent placement.

Univariate model showed an increased frequency of PEP recurrence in drinkers, former drinkers and former smokers, as well as patients who were suspected of having SOD, had undergone pancreatic sphincterotomy, had a moderate/difficult cannulation and/or had two or more pancreatic injections. The frequency of PEP was reduced in current smokers.

Multivariate models showed that the only independent significant predictors of PEP were current drinking (odds ratio 4.70), former cigarette smoking (OR 3.29), suspected SOD (OR 3.69), and pancreatic sphincterotomy (OR 5.91).

It was concluded that current alcohol use and potentially former cigarette smoking are new risk factors for PEP. (Debenetz, A., Raghunathan, T., Wing, J., et al. "Alcohol Use and Cigarette Smoking as Risk Factors for Post-Endoscopic Retrograde Cholangiopancreatography Pancreatitis." *Clin Gastroenterol Hepatol*, 2009; Vol. 7:353-358.)

Increased ALT in Asymptomatic Chronic Hepatitis B Infection

A total of 217 asymptomatic patients with chronic HBV who were HBeAg-negative, anti-HBe antibody positive, with normal ALT levels, were followed. Spontaneous increases in ALT levels (ALT flared),

were considered if they were greater than two-fold of the upper limits of normal and were accompanied by HBV DNA levels greater or equal to 10^5 copies per milliliter, or a 100-fold increase from the previously measured levels.

During a median follow-up period of 69 months, spontaneous ALT flares occurred in 43 patients (4.3% per year), with cumulative probability of 10.8% and 47.3% after five and 10 years, respectively.

Based on multinomial logistic regression, the probability of ALT flare correlated with age 30 years or greater at presentation (odds ratio 5.31), male sex (OR 4.54) and presence of a pre-core mutation (OR 10.99), the median time to spontaneous ALT flare after enrollment was 25 months.

It was concluded that in asymptomatic patients with chronic HBV infection who have normal ALT levels and are HBeAg-negative, the annual rate of ALT flares was 4.3%. Pre-core mutant, male sex and age greater than 30 years at presentation are independent predictors for an ALT flare. A follow-up every 3 months can capture up to 90% of flares and would help identify patients who require antiviral therapy. (Kumar, M., Chauhan, R., Gupta, N., et al. "Spontaneous Increase in Alanine Aminotransferase Levels in Asymptomatic Chronic Hepatitis B Virus-Infected Patients." *Gastroenterology*, 2009; Vol. 136:1272-1280.)

Murray H. Cohen, D.O., editor of "From the Literature" is a member of the Editorial Board of *Practical Gastroenterology*.

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Principles of Clinical Gastroenterology

Editor: Tadataka Yamada

Wiley-Blackwell, 672 Pages

ISBN: 9781405169103; \$159.95

This first edition of *Principles of Clinical Gastroenterology* is edited by Tadataka Yamada, the author of the well-known *Textbook of Gastroenterology*. There are many contributing editors to this text including David Alpers, Anthony Kalloo, Neil Kaplowitz, Chung Owyang and Don Powell. The authors are renowned authorities in the field of gastroenterology. The text is based on a clinical approach to signs and symptoms of gastroenterological disorders covered in the *Textbook of Gastroenterology*. This book expands on these concepts and covers the features of major clinical disorders of gastroenterology and hepatology from a clinician's point of view. It is a practical guide to diagnosis and management in clinical practice and is intended not just for gastroenterologists but also for students, house officers, and practitioners who are not primarily gastroenterologists.

The 31 chapters are written as approaches to specific clinical scenarios that may be encountered in the everyday clinical setting. Chapters include abdominal pain, obesity, constipation, and unintentional weight loss. Each chapter is divided into epidemiology, history, signs and symptoms, diagnosis, treatment and prognosis. The concept of each chapter is approached from the aspect of the symptom and covers all the different causes and treatments for that particular symptom. For example, for the symptom of abdominal pain, a complete differential diagnosis including rare and obscure causes is included. This chapter also includes specific questions to ask the patient as well as "red flags" to be aware of. A table on the etiology of abdominal wall pain, diagnostic workup of abdominal pain, and an approach to treatment are also included.

There are dedicated sections to hepatology covering acute liver failure, liver masses, pregnancy and viral hepatitis. There are also chapters covering the other aspects of patient care, such as the economic analysis in the diagnosis of gastrointestinal diseases and genetic counseling.

Each chapter also has several graphs, tables, and diagrams to assist with the reader's understanding of the concepts. For example, in the chapter on dysphagia, there is an excellent figure categorizing

esophageal motor dysfunction by both hypomotility as well as hypermotility. In the chapter on dyspepsia, a management algorithm for new-onset dyspepsia covers the concepts of when to test for *H. pylori*, when to consider empiric proton pump inhibitor trial and when to proceed to endoscopy. Treatment concepts are addressed in an evidence-based manner. The end of each chapter contains an extensive list of references for the inquisitive reader.

The editors and contributors have fulfilled their objectives remarkably well. The book is a practical guide for all clinicians and not just gastroenterologists. However, the text is not intended to cover an in-depth discussion of the basic science underlying the disease processes nor the myriad of diagnostic and therapeutic modalities available. The authors do an excellent job of addressing the common scenarios encountered in the clinical setting. They approach diagnosis and management in a systematic manner that is easy to follow. The overall quality of the text is excellent and visually pleasing. *Principles of Clinical Gastroenterology* is a welcome companion for current gastroenterology and hepatology textbooks. It is a quick review and adjunct in clinical practice for physicians ranging from the medical student to the gastroenterologist.

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Teaching Atlas of Abdominal Imaging

Harisinghani and Mueller

Thieme Publishing, 2009

ISBN: 9781588906564; \$129.95/€99.95

Doctors Harisinghani and Mueller compiled the *Teaching Atlas of Abdominal Imaging* from classic cases presented at Massachusetts General Hospital Division of Abdominal Imaging radiology rounds.

The atlas is a 530-page, well-bound, hardcover book in case-based format divided into abdominal organ systems with an additional section on the pelvis. Each of the 155 cases is about three pages long and is divided into two sections—the specific case followed by a more general discussion. Each case begins with a

BOOK REVIEWS

brief clinical presentation followed by the images, radiological findings, diagnoses, and differential diagnoses. The general discussion that follows is divided into sections labeled as background, clinical findings, complications, etiology, imaging findings, treatment, prognosis, and finally “pearls” and “pitfalls” of imaging. The discussions are concise and interesting. For example, a discussion of Ascariasis includes the life cycle and various paths of invasion as the helminth travels through the human body from egg to adult. The imaging findings section reviews the classic radiological signs demonstrated in each modality (plain film, barium studies, CT, US, MR, ERCP) and the role of each imaging procedures in helping to make a diagnosis. The suggested readings section after each case lists the more recent articles from the literature pertinent to the general discussion of the case. Overall, the atlas focuses on CT and MR, with correlations with fluoroscopy and barium studies when applicable.

The authors who are well-known master teachers of abdominal imaging have compiled cases from the common to the rare and exotic. The discussions and

clarity of the images are excellent. The target audience is abdominal radiologists, fellows, and radiology residents, but with the increasing integration of clinical and imaging parameters into gastroenterology clinical practice, this teaching atlas would be of value to most gastroenterologists.

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Send in a brief case report. No more than one double-spaced page. One or two illustrations, up to four questions and answers and a three-quarter to one-page discussion of the case. Case to include no more than two authors. A \$100.00 honorarium will be paid per publication.

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