**Gastroenterology: A Colour Handbook**
Editors: Ralph A. Boulton, H.J.F. Hodgson, Sanjeev Gupta, Claire Cousins
Paperback: 240 pages
Publisher: Manson Publishing Ltd
Price: $24.95

*A Colour Handbook: Gastroenterology* is an excellent handbook for practitioners who care for patients with gastrointestinal pathology, medical residents across subspecialties, gastrointestinal fellows in the early stages of training as well as mid-level providers. This handbook is not designed as a comprehensive text or a review book; rather, it provides a targeted clinically based overview of a majority of common gastrointestinal pathologies. The handbook is organized in an intuitive cranial to caudal format with an individual chapter dedicated to each organ or division of the GI tract. The organization of the content allows the reader to quickly find the organ or region of interest, and if a specific topic is desired, the index is complete and allows for quick navigation. Each diagnosis is presented as an outline with bolded headers (definition, epidemiology, pathology, histology, clinical presentation, evaluation, prognosis and management) which allow a reader to quickly find the information most relevant to them. Each chapter and section is supplemented with multiple high quality images (physical exam findings, endoscopy/colonoscopy, gross pathology, histology, and radiology) that allow the reader to see examples of items that are seen by the gastroenterologist and that are commonly referred to when reading surgical, pathology, and imaging reports. Of note the majority of the content is targeted to adult patients and a chapter on the liver is notably absent. However, these two considerations will not prevent a general pediatrician or a pediatric gastroenterologist from finding this text useful.

This book is ideally suited for caregivers who need a quick overview of a disease that they may not treat frequently. In addition this handbook is well suited for those individuals who are visual learners and provides more color images than most comprehensive or review texts. For trainees this book serves as a quick clinical reference with full-size color images and does not require carrying around a larger text, be dependent on a computer, or limited to the small screen size of a smartphone. This text has recently been used successfully in our Pediatric GI clinic as a teaching tool to show physical exam and procedural findings as well as representative histopathology results to residents rotating in our outpatient clinic. It is quickly reached for because of the ability for residents to quickly review an individual topic between patients.

I highly recommend this handbook in spite of its limitations as it addresses the majority of GI topics. The high quality and the number of images in the handbook are its best quality. In addition, as a result of the organization and brevity, this handbook has the unique ability to quickly provide relevant clinical information to the busy clinician and at the same time provide enough depth of information to a trainee to assist in their knowledge base and patient care responsibilities.

Raza Patel MD, MPH
Digestive Diseases and Nutrition Center
Women and Children’s Hospital of Buffalo
Buffalo, New York

**Evidence-Based Gastroenterology & Hepatology**
Editors: John McDonald, Andrew Burroughs, Brian Feagan, M. Brian Fennerty
Publisher: Wiley-Blackwell
ISBN: 978-1-4051-8193-8
Price: $299.95

Evidence-Based Gastroenterology & Hepatology, now in its third edition, primarily aims to review and grade evidence for management of the major gastrointestinal and hepatic diseases encountered in clinical practice. There are few other texts that not only reference clinical trials and case series in the literature but also discuss the validity and clinical utility of the results to this extent. Care is taken to point out when there are conflicting results from multiple trials, when overly-specific inclusion criteria were used in a particular study, or when patient demographics may not have represented the general population. This is all thoughtfully reviewed prior to making a general statement about the benefits of a therapeutic option.

There is a strong focus on pharmacological therapy and endoscopic intervention, with each chapter summarizing the strengths and weaknesses of the existing data. All the major diseases are here, with extensive coverage of irritable bowel syndrome, GERD, IBD, acute pancreatitis, viral hepatitis, and several liver

(continued on page 44)
transplant topics. Additionally, a few “diagnostic”
topics get full coverage, including colorectal cancer
surveillance and non-histological assessment of liver
fibrosis. Contributing authors are spread across North
America, Europe and Australia.

The authors did not attempt to write a complete
gastroenterology text. Indeed, less common illnesses
are not covered, and introductory, background,
epidemiologic and pathophysiologic information is
quite brief for the most part. The meat of this book is
really its evaluation of treatment options. Chapters are
broken up into a variety of topic sections that vary in
scope, such as multiple specific “drug A vs. drug B”
trials for variceal bleeding prevention, probiotic use in
IBS, or prophylactic antibiotic use in acute pancreatitis.
In sum they provide a thorough coverage of what we do
and do not know about treating a particular disease. It
does a quick job of differentiating which practices are
based on solid data and randomized trials, and those that
rest on weaker case series or anecdotal evidence. Tables
are spread throughout for a visual summary of results
when multiple papers have addressed the same clinical
problem. Most chapters conclude with a brief statement
from the authors, and there are many useful proposed
treatment algorithms. It is an appropriate companion for
patient-centered teaching topics and is a great source to
review the level of data that supports (or refutes) current
treatment practices. The chapters on acute non-variceal
gastrointestinal hemorrhage, pouchitis after restorative
proctocolectomy, and nonalcoholic fatty liver disease
are particularly well-done.

There are some areas for improvement. As with
any text attempting to convey the most current data, it
will suffer from its static print format as new trials and
studies are released. To remedy this, the authors promise
planned updates of chapters at “regular intervals” on the
publisher’s Evidence-Based Medicine Series website
for free. By its nature, much of the text reads a bit like
the results section of a scientific paper, which can be
dry unless you are reading with a specific question
in mind. The content is inconsistent. Some chapters
contain several pages on background, pathophysiology,
epidemiology, and diagnosis, while others deal
exclusively with management. Beginning trainees will
need a companion text, as many of the clinical signs and
symptoms, as well as diagnostic tests, are mentioned
in tables and scoring systems without any explanation.
In terms of general focus, the major emphasis is on
evidence relating to disease management, particularly
pharmacologic interventions, and this aspect is done
quite well. Celiac disease serologies are covered, but
there is no information on H.pylori testing, for instance,
and nothing on the use of serologic testing in IBD is
discussed. Every chapter could be expanded to include
at least a review of the best evidence for ‘gold-standard’
diagnostic practices. A major omission is the general
lack of cost-effectiveness information. Finally, many
chapter summaries are too short.

In summary, Evidence-Based Gastroenterology
& Hepatology succeeds as a place to go for detailed,
evidence-based therapeutic information. It is exhaustive,
not in scope, but in its unique review of the literature. It is
well-suited for the practicing attending or senior trainee
who is already comfortable with the general basics
of the diagnosis and management of gastrointestinal
and hepatic illnesses. It might be a good addition to a
more classic general gastroenterology text for those still
learning the field. It provides many clinically-useful
algorithms and is a great resource for teaching.

Mark Deneau, MD, GI Fellow
Steven Wu, MD
Associate Professor of Pediatrics
Division of Pediatric Gastroenterology and Nutrition
University of Utah, Salt Lake City, Utah

Metabolic Basis of Obesity
Editor: Rexford S. Ahima
Publisher: Springer Press 2010
ISBN 978-1-4419-1606-8
Price: $148.05

The increasing prevalence of obesity verified globally
has been creating a challenge to the various professionals
involved in treating this disease. The focus of this book is
to discuss the principal metabolic and physiopathologic
mechanisms involved in the etiology of obesity and
relate them with major diseases (in particular: insulin
resistance, lipid metabolism and cardiovascular disease,
and NAFLD). Subjects are presented clearly and
concisely, aiding in understanding of obesity, not just as
a multi-factorial disease but as an important component
involved in the metabolic syndrome.

The authors include a brief review about relevant
points involving human energy balance, the interactions
between macronutrient metabolism, as well as the
neural control involved in the regulation of hunger
and satiety. In addition, this book highlights recent discussions regarding obesity with HIV lipodystrophy syndrome and genetic aspects involved in obesity.

The chapters “Gastrointestinal hormones and obesity” and “Gut microbes, immunity and metabolism” are especially of interest to gastroenterologists because of the major hormones secreted along the gastrointestinal tract that can be associated with obesity. In addition, there is discussion of recent studies indicating that changes in intestinal microbiota can have an impact on metabolic and immune homeostasis, thus contributing to the emergence of some diseases, including obesity.

Epidemiological evidence has shown that the postnatal and intrauterine environment represent important factors in the development of adult obesity. Even though there is a chapter addressing the negative impacts of obesity in the female reproductive system, these themes deserve more attention than found in this book, given the relevance of these issues to the understanding of the disease determinants of obesity.

The authors provide a full discussion about the metabolism of obesity, including current topics such as adipokines, classic hormones associated with obesity, abnormalities in lipid metabolism and glycidyl ether. Thus, this book is a handy reference for all health professionals involved in the clinical management of obesity. Medical students, physicians, and researchers interested in understanding the metabolic basis of obesity will find this book of interest.

Ángelo J G Bós
Geriatrician, Assistant Professor
Darlide Passos
Nutritionist
Institute of Geriatrics and Gerontology of Pontifical Catholic University of Rio Grande do Sul, Brazil

Acencing the Hepatology Questions on the GI Board Exam: The Ultimate Crunch-Time Resource

Authors: Brennan M.R. Spiegel & Hetal A. Karsan
Publisher: Slack Incorporated 2012
ISBN number: 978-1-55642-953-8
Price: $77.70 - 87.95

This 260-page book is the second book in the series by Dr. Spiegel and was written with a focus on hepatology-related GI board exam questions. The book’s aims are to provide an emphasis on key concepts in liver disease. This knowledge will then guide both clinical practice and successful completion of the Internal Medicine GI board exam. The book is divided into four chapters including: 1) a description of the liver questions on the boards, 2) clinical vignettes, 3) board review style questions based on an understanding of “clinical thresholds,” and 4) a sample self-test with questions and scoring guide. While this book is written for adult trainees, many of the concepts are also applicable for pediatric gastroenterologists.

The first chapter provides an overview of what liver questions will be covered on the GI board exam. This overview describes what topics should receive highest priority.

The clinical vignettes are succinct and followed by answers and explanations which provide not only the correct diagnosis, but also expand the understanding of other pertinent issues which should be considered with similar patients. This aspect helps the reader/clinician to form associations to the clinical problem and to be prepared for similar questions during the exam, or patient care issues in life. Other helpful features are the illustrations and figures, which provide a visual aid to clarify key points and reinforce the concept being addressed. Finally, each vignette utilizes a standardized summary to emphasize what the author views as the key point or points from each scenario.

Chapter 3 provides nearly 5 pages of “clinical threshold values” that should be engrained before the test. These are the values that should be known and understood through constant clinical care, and this presentation can help emphasize what values are important in specific clinical situations. This is valuable information, but the student will need to be disciplined to focus on the concise presentation. Ideally, this information will be re-emphasized by going through the vignettes mentioned above. Consistent review and application of these numerical values appears key to using this chapter effectively.

Finally, the self-test focuses on the key concepts that should have been learned through the use of the book. These questions are short, succinct, and if the student makes a true effort to write the answers and then confirm his knowledge, the results should serve as a good indicator of his preparedness for the examination. Anyone who purchases this book should consider the test before studying this book as a self-assessment which will further motivate the examinee to focus each time the book is opened. This practice test will help identify
areas in each individual’s knowledge base that require further emphasis. This book is a succinct, readable text that can help hepatologists and gastroenterologists prepare for and pass their board exam.

M. Kyle Jensen, MD, MSc
Assistant Professor
Pediatric Gastroenterology/Hepatology and Liver Transplant Primary Children’s Medical Center
University of Utah, Salt Lake City, Utah

Ascites, Hyponatremia And Hepato-Renal Syndrome: Progress In Treatment
Alexander L. Gerbes
Publisher: KARGER 2011
Price: £105.00, $182.00

This book includes 20 sections written in a digestible, easy to understand clinico-pathological format which makes it an indispensable reference in the subject for a wide range of health professions, including students of nursing and medicine as it fills the current gap in this complex field and providing up to date information in a wide range of issues under one cover.

It includes the differential diagnosis of ascites, along with promising new diagnostic tests to determine the emergence of spontaneous bacterial peritonitis, a very common cause of morbidity and mortality in patients with chronic liver disease, allowing for early implementation of appropriate preventative and curative measures. In addition, it contains sections on the optimal and balanced management of intractable ascites with diuretics, plasma expanders, and the novel therapeutic aquaretic agents “Vaptans”, which is also effective in management of liver cirrhosis associated and diuretic induced hyponatremia. This book has dealt with the above afore mentioned sections very well in details which are deep enough, yet concise to give a logical and comprehensive understanding of these issues.

Furthermore, it provides a concise, clear guidance for the optimal management of hepato-renal syndrome, a condition that once carried a hopeless prognosis in the absence of liver transplant, and explains how to successfully select a patient for pharmacological, surgical or radiological interventions and to maximise their opportunities to a long term favourable outcomes. Moreover, it explains how to choose the suitable candidate for orthotopic liver transplant. However, despite pre-transplant treatment with terlipressin and albumin, the 5 years graft and patient survival remains low at 51% and 60%-65%, respectively.

This book provides in-depth information for performing paracentesis along with a full explanation of the benefits of using albumin. Additionally, the section on cardio-renal syndrome was elegantly illustrated. Therefore, busy cardiologists can easily find an update on the recent observations that link impaired renal function and decreased cardiac systolic function in advanced cirrhosis (the hypothesis of cardio-renal syndrome in hepatic cirrhosis).

Each section of this extremely useful book was well written by a group of experts in their fields and supported by tables, figures, references and summarised by take home key messages.

Certainly, this is a unique, concise, and extremely useful reference for management of ascites, hyponatremia, and hepato-renal syndrome which no library can do without.

Accordingly, we highly recommend it to be in all nephrology, gastroenterology, acute medicine and general medicine units as a quick reference and guideline for their trainees.

Atif A Khalil1, Suhail Ahmed2, Mahir A Hamad3, Mohamed H Ahmed4
1Department of Nephrology, Royal Liverpool and Broadgreen University Hospitals, Liverpool, UK
2Department of Gastroenterology, Aintree University Hospital, Liverpool, UK
3Division of Acute Medicine, The James Cook University Hospital, Middlesbrough, UK
4Department of Cardiology, Cardiothoracic Division, The James Cook University Hospital, Middlesbrough, UK

John Pohl, M.D., Book Editor, is on the Editorial Board of Practical Gastroenterology

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Islet Autotransplantation for Chronic Pancreatitis in Children

Chronic pancreatitis, although rare in children, can be a conundrum for the medical provider due to a lack of clinical trials for treatment. The authors of this study evaluated the efficacy of total pancreatectomy with islet autotransplantation (TP/IAT), to preserve beta cell function in pediatric patients with chronic pancreatitis. The study followed 19 pediatric patients over a 3-year period who underwent TP/IAT for chronic pancreatitis which was defined by clinical characteristics and imaging consistent with chronic pancreatitis (for example, pancreatic calcifications). At the time of TP/IAT, all study subjects completed health-related quality of life assessments (HRQOL) prior to surgery; 3, 6, and 12 months after surgery; and annually using the Medical Outcomes Study 36-item Short Form Health Survey. This survey utilized 8 scale scores which formed a Physical Component Summary and a Mental Component Summary. Narcotic and insulin usage were followed over time as well.

Patient ages ranged from 5 to 18 years, and the cause of pancreatitis in the majority of patients was due to genetic mutations or idiopathic causes. Prior to the procedure, all patients had been hospitalized multiple times due to pancreatitis, and all patients were taking narcotics. After TP/IAT, the Physical Component Summary showed a significant improvement in scoring while the Mental Component Summary showed a trend toward improvement that was not significant. It was noted that 14 patients were not using narcotics after this procedure, and 2 patients were taking narcotics only rarely. Insulin independence was achieved in 7 patients, and 4 patients had minimal exogenous insulin usage. Patients who had undergone a prior surgical drainage procedure prior to TP/IAT continued to require insulin.

This study demonstrates that TP/IAT is an excellent treatment modality for pediatric patients with chronic pancreatitis although this complex procedure should be performed at institutions with expertise in this technique.


Cardiac Function in Biliary Atresia

Biliary atresia is a leading cause of liver transplantation in children, and similar to adults with cirrhosis, it is expected that some degree of cardiac dysfunction may occur associated with liver disease. However, cardiomyopathy has not been fully studied in this specific pediatric population. The authors of this study from a tertiary pediatric hospital with transplantation experience evaluated 40 pediatric patients with biliary atresia (median age 8 months) undergoing liver transplantation evaluation who subsequently underwent 2-dimensional echocardiography as part of standard procedure. Their echocardiogram results were compared with age and sex-matched controls.

All pediatric patients with biliary atresia had significant liver disease, and seven of these patients died while awaiting liver transplantation. None of the biliary atresia patients had congenital cardiac defects which can be associated with biliary atresia. However, compared to controls, patients with biliary atresia had significant changes in cardiac structure and function, including an increase in left ventricle thickness, septal thickness, left ventricular mass, and left ventricular shortening fraction. No specific patient parameter or PELD score was associated with findings of the abnormal echocardiograms although cirrhotic cardiomyopathy was present in the majority (72%) of patients. Additionally, no specific echocardiogram findings were found between biliary atresia patients who survived to transplantation and those who died awaiting transplant. Biliary atresia patients with echocardiogram abnormalities had a longer pediatric intensive care unit stay as well as an overall hospital length of stay compared to those biliary atresia patients with no cardiac abnormalities.

This study demonstrates that cardiac dysfunction is common in biliary atresia patients prior to liver transplantation, and cardiac function in this patient population affects recovery time after transplant surgery. The mediators involved in the progression of cardiac dysfunction in biliary atresia are unknown and should be studied.

Urotensin II as a Marker of Portal Hypertension
The use of biomarkers has the potential for establishing disease presence as well as monitoring for disease progression. Urotensin II is a powerful vasoconstrictor that is noted to be increased in the serum of adults with cirrhosis. The authors of this study evaluated Urotensin II levels in 3 patient groups, including healthy children with no liver disease, healthy adults with no liver disease, and children with both cirrhosis and portal hypertension. There were 20 children in the group with liver disease, of which biliary atresia was the cause of disease in the majority of the study group.

Urotensin II was determined using a radioimmunoassay. Data was recorded including age, gender, height, weight, cause of liver disease, presence of portal hypertension, Child-Pugh score, and pediatric end-stage liver disease (PELD) score (for children 12 years of age or younger). Clinical outcome was followed for 2 years.

Urotensin II levels did not differ between healthy children and adults and did not differ between healthy boys or girls. In children with liver disease and portal hypertension, urotension II levels were significantly higher compared to the healthy child group. Additionally, urotensin II levels correlated strongly with liver disease severity as assessed by the Child-Pugh or PELD score. This study demonstrates that urotensin II may serve as a potential biomarker for the presence and progressoin of portal hypertension in children with chronic liver disease. Further studies are needed to verify these findings, and it is unknown if the cause of an elevated urotensin II in children is due to cirrhosis or from inherent vascular changes seen in portal hypertension.


Fluid Bolus is Associated with Mortality in Third-World Children
In sub-Saharan Africa, rapid intravenous fluid resuscitation is standard of care for children who present to intensive care facilities with shock. It is unknown if the effect of fluid resuscitation in children is beneficial when there are other associated morbidities, including starvation. This multi-center, open, randomized, controlled trial took place at multiple clinics in Kenya, Tanzania, and Uganda. Eligible subjects consisted of children 60 days to 12 years of age with shock associated with fever, respiratory distress, impaired consciousness, and impaired perfusion. Children with severe hypotension were placed into two groups. Stratum A children were randomly assigned to receive 20mL per kg normal saline, 5% albumin, or no bolus. Children in Stratum B were randomly assigned to receive 40mL per kg of normal saline or 5% albumin. Children with severe malnutrition, gastroenteritis, and dehydration due to trauma, surgery, or burns were excluded. Study endpoints included mortality at 48 hours, mortality at 4 weeks, neurologic events at 4 and 24 weeks, hypotensive shock 48 hours after randomization, and any other adverse events.

Over the two-year study period, 3141 children were enrolled in Stratum A (57% with malaria, 4% with HIV). Stratum B contained 29 children. Stratum A demonstrated significantly increased mortality in those children receiving a bolus compared to no bolus at both 48 hours and at 4 weeks. Neurologic outcome was the same in all three groups. There was no difference in the percentage of children who developed pulmonary edema or increased intracranial pressure. In Stratum B, the albumin-bolus group had 69% mortality and the saline-bolus group had 56% mortality, with no significant difference.

These findings go against standard dogma that children with shock should receive rapid fluid resuscitation. It is unclear why this effect is seen in a third-world setting. The study authors speculate that the vasoconstriction seen in shock may have some benefits in certain clinical settings, and the effect of giving a bolus could lead to other complications, such as reperfusion injury. Intervention by fluid bolus may not be life-saving in poor countries with limited medical resources.


John Pohl, M.D., Book Editor, is on the Editorial Board of Practical Gastroenterology
HBV DNA and ALT as Risk Factors for Hepatocellular Carcinoma
To determine whether risk for hepatocellular carcinoma (HCC) can be accurately determined from long-term changes in serum levels of HBV DNA or ALT, serum levels of each were determined at enrollment and during followup analysis of 3160 participants in the REVEAL-HBV study. Development of hepatocellular carcinoma was determined from followup examinations and computerized linkage with National Cancer Registry and National Death Certification profiles. Multivariate-adjusted hazard ratios (HRs), and 95% confidence intervals (CIs) were estimated using Cox Regression Models.

During 38,330 person/years of followup, 81 participants developed HCC (incidence rate 211.3/100,000 person/years). The risk for hepatocellular carcinoma was only slightly higher for participants whose followup levels of HBV DNA spontaneously decreased to less than 10,000 copies per ml, compared with those above same.

Compared with the control group, the HRs for long-term levels of HBV DNA that persisted from 10,000 to 100,000 copies per milliliter decreased to/persisted at 100,000 copies per milliliter or decreased/persisted at 1,000,000 to 10,000,000 copies per milliliter were 3.12, 8.85, and 16.78, respectively. A gradient in ALT level was significantly associated with hepatocellular risk from all low-normal to ever high-normal, to transient abnormal, to persistent abnormal.

It was concluded that long-term changes in serum levels of HBV DNA and ALT are independent predictors of risk for hepatocellular carcinoma. Regular monitoring of those levels is important in clinical management of chronic carriers of HBV.


Evaluation of Solid Pancreatic Lesions by EUS
To assess the false-positive (FP) rate of EUS-FNA (fine needle aspiration) with cytologic analysis in a retrospective study of a tertiary care referral center, a study was carried out, involving 367 patients with solid pancreatic lesions in whom EUS-FNA cytology reports were interpreted as positive or suspicious for malignancy and resulting in subsequent surgical resection.

Attention was directed toward those cases that were proven surgically to be benign. The FP rate for EUS-FNA was 4 of 367 (1.1%), when only “positive” cytologic findings were interpreted as malignant and 14 of 367 (3.8%) when both suspicious and positive cytologic findings were interpreted as malignant. Among the four cases falsely interpreted as positive, one was falsely diagnosed cytologically as a neuroendocrine tumor and three as adenocarcinomas. All FP specimens showed chronic pancreatitis on surgical pathology.

The incidence of discordance between cytology and surgical pathology did not change over time.

In this retrospective cohort trial at a single center, the FP rate for EUS-FNA of solid pancreatic lesions was 1.1%. This finding is in line with previous studies that have evaluated FP cytology rates with EUS-FNA of solid lesions.


Barrett’s Esophagus With Low-Grade Dysplasia
To investigate the incidence of high-grade dysplasia (HGD) and esophageal adenocarcinoma (EAC), and to compare progression in patients with different forms of LGD, the effects of consensus diagnosis of LGD on progression rates to HGD and EAC among expert pathologists were assessed.

In a multicenter outcomes project, 210 patients with BE and LGD (classified as incident, prevalent or persistent), were included. Patients were followed for an average of 6.2 years (959.6 patient/years). Persistent LGD was defined as detection of LGD on two or greater consecutive occasions during the followup period and extent is either unifocal (one level), or multifocal (more than one level).

Histologic specimens were reviewed by two blinded pathologists.

Six patients developed EAC (0.44% per year). A total of 21 developed HGD (1.6% per year). The incidence of a combination of two was 1.813% per year. There were no associations between presence of prevalent, incident, or persistent LGD and the extent of LGD with progression rates. Based on consensus,

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diagnosis of 88 reviewed specimens, there was no difference in the progression of LGD to either EAC or combined HGD and EAC (0.94% per year, 0.87% per year and 0.84% per year, respectively), when all three pathologists were involved.

Overall, patients with BE and LGD have a low annual incidence of EAC, similar to nondysplastic BE. There were no risk factors for progression and there is significant intraobserver variation and diagnosis, even among expert pathologists.


Celiac Disease and Relationship to IBS
To evaluate the prevalence of CD antibodies and biopsy-confirmed CD among patients with nonconstipated IBS, (NC-IBS) in a large US population, the study was conducted at four sites from 2003 to 2008 and data was compared from 492 patients with symptoms of NC-IBS to 458 asymptomatic individuals who underwent colonoscopic evaluations for cancer screening or polyp surveillance (controls). All participants provided blood samples for specific and nonspecific CD-associated antibodies. Additionally, patients with IBS were analyzed for CBC, metabolic factors, ESR, CRP, and TSH. Subjects with CD-associated antibodies were offered EGD and duodenal biopsy analysis.

Of patients with NC-IBS, 7.3% had abnormal results for CD-associated antibodies compared with 4.8% of controls (odds ratio 1.49). Within the NC-IBS group, 6.5% had antibodies against gliadin, 1.22% against tTG and 0.6% against endomysium versus controls for all antibodies tested. CD was confirmed in 0.41% of patients in the NC IBS group and 0.44% of controls.

It was concluded that although CD-associated antibodies are relatively common, the prevalence of CD among patients with NC-IBS is similar to that among controls in a large US population. These findings were considered to challenge recommendations to routinely screen patients with NC-IBS for CD. More than 7% of patients with NC-IBS had CD-associated antibodies, suggesting that gluten sensitivity might mediate IBS symptoms. Further studies are recommended.


Conservative Approach to Necrotizing Pancreatitis
Treatment of patients with necrotizing pancreatitis has become more conservative and less invasive. To evaluate data from prospective studies to support the efficacy of this change, a prospective multicenter study of treatment outcomes among necrotizing patients was carried out. Data was collected from 639 consecutive patients with that disorder from 2004 to 2008, treated at 21 Dutch hospitals. Data was analyzed for severity, intervention and outcome.

Overall mortality was 15 percent. Organ failure occurred in 240 patients (38%) with 35% mortality. Treatment was conservative in 397 patients (62%), with 7% mortality. An intervention was performed in 242 patients (38%), with 27% mortality. This included early emergency laparotomy in 32 patients (5%), with 78% mortality. Patients with longer times between admission and intervention had lower mortality (0 - 14 days at 56%, 14 - 29 days at 26%, and greater than 29 days at 15%). A total of 208 patients (33%), received interventions for infected necrosis with 19% mortality. Catheter drainage was most often performed as the first intervention (63% of cases), without additional necrosectomy at 35% of patients. Primary catheter drainage had fewer complications than primary necrosectomy (42% vs. 64%). Patients with pancreatic parenchymal necrosis (N = 324), compared with patients with only peripancreatic necrosis (N =315), had a higher risk of organ failure (50% versus 24%), and mortality (20% versus 9%).

It was concluded that approximately 62% of patients with necrotizing pancreatitis can be treated without an intervention and with low mortality. In patients with infected necrosis, delayed intervention and catheter drainage as first treatment improves outcome.


Infliximab Therapy With Early Mucosal Healing Improves Clinical Outcome in Ulcerative Colitis
In the active UC trial (ACT-1 and ACT-2), patients

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with UC treated with Infliximab were more likely than those given placebo to have a clinical response, undergo remission and have mucosal healing. To investigate the association between early improvement endoscopically and subsequent clinical outcomes, patients underwent endoscopic evaluation at week 0, 8, 30 and 54 (ACT-1), and were categorized into 4 subgroups by week 8.

The association of week 8 endoscopic subscores, subsequent colectomy risk, symptoms and corticosteroid use outcomes were analyzed. Mucosal healing was defined as a Mayo endoscopy subscore of 0 or 1 (mild). Infliximab-treated patients with lower week 8 endoscopy subscores were less likely to progress to colectomy through 54 weeks of follow-up evaluation. The trend was not observed among patients given placebo. Patients with lower endoscopic subscores achieved better symptomatic and corticosteroid use outcomes at week 30 and 54.

Among patients who achieved clinical response at week 8, trends in subsequent clinical outcomes by week 8, endoscopic subscores were generally consistent with that for the overall patient population. No trends were observed among patients who achieved clinical remission.

It was concluded that the degree of mucosal healing after 8 weeks of Infliximab was correlated with improved clinical outcomes, including colectomy. Similar trends were observed for all outcomes except colectomy among the subgroup with clinical response at week 8. The degree of mucosal healing at week 8 among those in clinical remission did not predict subsequent disease course.


Improvement of Liver Fibrosis with Iron Chelation Therapy
To study the effects of the oral iron chelator Deferasirox on liver fibrosis and necroinflammation in a large population of patients with iron overload b-thalassemia, data from 219 patients with that disorder was collected from histologic analysis of biopsy samples taken at baseline and after at least three years of treatment. The treatment response was assessed from liver iron concentrations at the baseline and at the end of the study. Liver fibrosis, necroinflammation and markers of iron overload and liver enzymes were recorded. Patients were also assessed by serologic analysis at baseline for HCV infection.

By the end of the study, stability of Ishak Fibrosis Staging Scores or improvements were observed in 82.6% of patients. Necroinflammatory scores improved by a mean value of -1.3. Improvements in fibrosis and necroinflammation were independent of HCV exposure or reduction in liver/iron concentration defined by the response criteria. Absolute changes in concentration of liver iron by the end of the study did not correlate with improved Ishak fibrosis or necroinflammatory scores.

It was concluded that Deferasirox treatment for three or more years reversed or stabilized liver fibrosis in 83% of patients with iron-overloaded b-thalassemia. This therapeutic effect was independent of reduced concentration of liver iron or previous exposure to HCV.


Murray H. Cohen, D.O., “From the Literature” Editor, is on the Editorial Board of Practical Gastroenterology

Answers to this month’s crossword puzzle:

FROM THE LITERATURE
Fifth Cycle of Probiotics & Microbiota Research Grant Announced

ALEXANDRIA, Va., The Global Probiotics Council (GPC), a committee formed by Danone and YAKULT HONSHA CO., LTD., announced the launch of the fifth annual Young Investigator Grant for Probiotics Research (YIGPRO). This grant provides two awards, each in the amount of $50,000, to promising young researchers. This year, the grant will continue to focus on the role of probiotics and gastrointestinal microbiota in health and wellness. Applications will be accepted until February 15, 2012.

Danone and YAKULT HONSHA CO., LTD. are the leading global companies on the forefront of raising awareness about the health benefits of probiotics through science-based education.

“We designed this grant program five years ago to attract young researchers to this field of study, and foster scientific research in the United States,” said Mr. Yoshihiro Kawabata, Director Deputy President, YAKULT HONSHA CO., LTD. “Based on the results of the past four cycles, we are confident that these grants will lead to scientific advancements that continue to add to the body of literature, and help uncover critical mechanisms by which probiotics promote health.”

The cutting-edge field of probiotics and microbiota research is gaining momentum worldwide. The microbes in our bodies outnumber our human cells by 10 to 1, and scientists are continuing to discover how the composition of the microbiota can influence our health in a variety of ways. New research is uncovering the potential functions of probiotic microorganisms, extending far beyond what was originally conceptualized.

“This scientific field has experienced a true revolution in the past few years and we are committed to push it forward,” said Jean-Philippe Pare, Executive Vice President Danone R&D.

Application procedures and additional details on the Young Investigator Grant for Probiotics Research program can be found at www.probioticsresearch.com.

About the Global Probiotics Council:
The Global Probiotics Council (GPC) was established in 2004 through a collaborative agreement between Danone and YAKULT HONSHA CO, LTD. The role of the GPC is to promote and/or advance probiotics in the world, through means such as:

i. Raising awareness of probiotics and their health benefits through science-based education and dissemination of information to health care professionals and the public;

ii. Communicating with government bodies, and other relevant interest groups; and

iii. Building relationships with leading researchers and research institutions and supporting collaboration research in the area of probiotics and intestinal microbiota.

GPC activities began with the establishment of the Probiotics Scientific Board in the United States. The Young Investigator Grant for Probiotics Research program was established to meet these goals by contributing to the advancement of probiotics research in the United States.

About Danone & Danone Research
Danone is the world’s leading producer of yogurt products. These products are sold under the Dannon and Danone brand names. Since its founding, Danone has built its business on product offerings, which combine health benefits and taste. Danone Research is the organization responsible for all Danone R&D activities (1200 employees worldwide). Its mission is to formulate Danone products with health benefits based on scientific evidence. It also studies the effects of food on health and aims to continuously improve the nutritional profile of Danone products worldwide. Among others, probiotic research is a key expertise of Danone Research. Over the past 90 years, Danone has amassed a collection of approximately 4,000 lactic bacteria strains or “cultures.” In addition to taste and texture, some of these cultures provide probiotic health properties. Such is the case of Bifidobacterium animalis DN-173 010, used to make Activia, and Lactobacillus casei DN-114 001, used to make Actimel (known as DanActive in the US and Canada). Because this culture collection holds considerable potential for product innovation, Danone Research is carefully studying it using state-of-the-art technologies to select the probiotic bacteria of the future. For more information, please visit www.danone.com/en/research-innovations.html, www.dannon.com.

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**About Yakult Honsha Co., Ltd.**

From our earliest research on lactobacilli, through the development of our food, cosmetics, and pharmaceutical businesses, Yakult has retained its commitment to improving human health. Today our responsibilities extend beyond basic health to embrace global social and environmental challenges. Yakult’s Central Institute works to elucidate the relationship between human health and intestinal microbiota, focusing on basic research into the structures and functions of microbiota. ‘YIF-SCAN’, Yakult’s state-of-the-art intestinal flora analysis system, selectively quantifies bacteria based on the unique gene sequences of individual microbiota. Symbiotic treatments (combining probiotics and prebiotics) have already been shown to promote the recovery of immune functions, prevent septic complications, promote absorption and digestion, improve nutritional status, and enhance recuperative powers by improving the balance of the microbiota. Yakult’s network extends through Asia, Oceania, the Americas and Europe and our products are sold through 27 overseas operations and consumed in 32 countries. Daily global consumption of Yakult dairy products numbered 30 million in June 2010. We will continue to strive to deepen our understanding of lactobacilli and support good health for all. Yakult U.S.A. Inc., the subsidiary of YAKULT HONSHA CO., LTD., is stationed in Torrance, CA. For more information, please visit www.yakult.co.jp/english, www.yakult.co.jp/institute and www.yakultusa.com.

For more information, contact Patricia Kearney or Ashley Hart: 703-841-1600
gpc@probioticsresearch.com

**Combination of Oral Drugs Suppresses Common Type of Hepatitis C, According to University of Michigan-Led Research**

**Researchers targeted the type of hepatitis C most common in the United States, results reported in New England Journal of Medicine**

Ann Arbor, Mich. – A new combination of investigative drugs successfully suppressed hepatitis C genotype 1 infection in a high percent of patients who had not responded to previous treatment in a study led by a University of Michigan hepatologist.

The study, which will be published Jan. 19 in the New England Journal of Medicine, focused on hepatitis C genotype 1, which is predominant in the United States and the most difficult to treat. Hepatitis C is a virus that infects the liver and can cause liver cancer and liver cirrhosis. It is transmitted through direct contact with infected blood and blood products.

In this pilot study, patients with hepatitis C genotype 1 infection, who had not responded to previous treatment with PEG-interferon alfa and ribavirin, were given a combination of two investigational direct-acting antiviral agents (daclatasvir and asunaprevir) alone, or were given these two antiviral agents along with PEG-interferon alfa-2a and ribavirin. All the patients saw their hepatitis C viral load drop rapidly, says Anna S. Lok, M.D., professor of Internal Medicine, Division of Gastroenterology at the University of Michigan Medical School and lead author of the study.

All 10 patients given the four drug treatment -- two direct-acting antiviral agents (daclatasvir and asunaprevir) that block the NS3 and NS5A regions of the hepatitis C virus plus PEG-interferon alfa and ribavirin - had sustained virologic response with undetectable virus at the end of treatment and at 12 weeks after stopping treatment. Four of the 11 patients given the two direct-acting antiviral agents only also achieved sustained virologic response.

A sustained virologic response or SVR means there is no detectable Hepatitis C virus in a patient’s blood after treatment is stopped. Achieving sustained virologic response is important, because research has shown that late relapse is rare.

“The two recently approved hepatitis C drugs - telaprevir or boceprevir - combined with PEG-interferon alfa and ribavirin have limited success in patients who have not responded to previous treatment with PEG-interferon alfa and ribavirin. Because of this high unmet medical need, there is a necessity for new combination regimens that can increase response rates in that population,” says Lok, who also is Director of Clinical Hepatology at U-M. “The high rate of sustained virologic response in patients who received the four drug regimen is very exciting. Although only four of 11 patients given the two direct-acting antiviral agents only achieved sustained virologic response, this is the first study to show that sustained virologic response can be achieved without the use of interferon or ribavirin. These data are very encouraging because PEG-interferon alfa and ribavirin are associated with many side effects and many patients with hepatitis C choose not to receive treatment for fear that they cannot

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tolerate those drugs.”

An estimated 170 million people worldwide are infected with hepatitis C, with genotype 1 being the most prevalent genotype. Up to 80 percent of those infected with hepatitis C will become chronically infected. Twenty percent of people with chronic hepatitis C will develop cirrhosis and, of those, up to 25 percent may progress to liver cancer. Although there is no vaccine to prevent hepatitis C, it is a potentially curable disease.

In the Phase II clinical trial, Lok, along with a team of researchers including scientists from Bristol-Myers Squibb, studied patients with Hepatitis C genotype 1, who had not responded to prior therapy with PEG-interferon alfa and ribavirin. The study was funded by Bristol-Myers Squibb.

“Overall, these results suggest that further research into combinations of direct-acting antiviral agents, with or without PEG-interferon and ribavirin, should be encouraged,” Lok says. “Caution must be exercised in selecting the right combination of direct-acting antiviral agents in studies of interferon-free regimens because in this study, all 7 patients who received only two direct-acting antiviral agents that did not achieve sustained virologic response had emergence of drug resistance variants to both drugs.”

In this study there were no serious adverse events on treatment or discontinuations due to adverse events. Diarrhea was the most common adverse event in both groups, but it was mild or moderate in all cases. Journal citation: N Engl J Med 2012;366:216-24
Funding: Bristol-Myers Squibb.
For more information, contact Mary F. Masson: mfmasson@umich.edu, 734-764-2220

Avaxia Biologics is Awarded Patent for its Proprietary Orally Active Antibody for Celiac Disease
LEXINGTON, MA., Avaxia Biologics, Inc., a privately-held biotech company developing oral antibody drugs that act locally within the gastrointestinal tract, announced today that the company was awarded U.S. Patent 8,071,101, “Antibody Therapy for Treatment of Diseases Associated With Gluten Intolerance.”

This patent, which expires on May 27, 2029, provides broad coverage for treating celiac disease using orally administered antibodies produced by the Company’s proprietary platform technology. This newly issued patent includes claims covering the composition of matter for Avaxia’s AVX-176 antibody, currently in development for celiac disease.

“We are pleased to receive this new patent,” stated Barbara Fox, PhD, CEO of Avaxia Biologics. “This is an important milestone for our company as it is our first issued patent and it validates that the company can obtain composition of matter claims for products derived from our antibody technology platform. We are actively building a strong IP portfolio with additional patent applications that will cover the broad range of disease applications the company has created with its oral antibody technology.”

Dr. Fox added, “This first patent covers AVX-176, an orally administered antibody designed to bind to gluten, the dietary protein that provokes celiac disease in susceptible patients. We are currently conducting an NIH supported program to advance the development of AVX-176 into pre-clinical models of celiac disease. Preliminary in vitro data are encouraging and we hope to be able to develop a product in the near future.”

About celiac disease:
Celiac disease is an inherited, autoimmune disease in which the lining of the small intestine is damaged from eating gluten and other proteins found in wheat, barley, rye, and possibly oats. Celiac disease is also known as celiac sprue, nontropical sprue, and gluten-sensitive enteropathy. The disease can develop at any point in life, from infancy to late adulthood. The symptoms of celiac disease can vary significantly from person to person with the most common being abdominal bloating and pain, chronic diarrhea, vomiting, constipation and weight loss. There is no medication available to treat the disease. Patients must follow a lifelong gluten-free diet in an attempt to avoid symptoms. More than 2 million people in the United States have the disease, or about 1 in 133 people.

About Avaxia Biologics, Inc.:
Avaxia Biologics is a development-stage company developing oral antibody therapeutics that act locally within the gastrointestinal tract. The antibodies are designed to treat both diseases of the GI tract and metabolic diseases. Using its proprietary antibody platform, Avaxia is developing products for inflammatory bowel disease, GI acute radiation syndrome, celiac disease, oral mucositis, diabetes and obesity.
For more information, contact Dr. Barbara Fox: bfox@avaxiabiologics.com, 781-861-0062

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FUJIFILM COMMITS $300,000 IN SUPPORT OF ASGE’S IT & T CAPITAL CAMPAIGN TO BUILD A NEW STATE-OF-THE-ART GI TRAINING CENTER

OAK BROOK, Ill. The American Society for Gastrointestinal Endoscopy (ASGE) Foundation has received a donation of $300,000 from FUJIFILM Medical Systems U.S.A., Inc.’s Endoscopy Division to ASGE’s IT & T Capital Campaign, a fundraising project to construct a new facility that will provide cutting-edge technology and training capabilities to significantly optimize current educational opportunities. The donation will be made over five years.

“We are grateful to Fujifilm Endoscopy for their generous financial support and for recognizing the importance of providing high quality physician education in an interactive environment using the latest technologies to improve physician performance and advance patient care,” said Gregory G. Ginsberg, MD, FASGE, president, American Society for Gastrointestinal Endoscopy. “The Endoscopy Division has been a dedicated partner of the ASGE and we look forward to working with them in the future as we open this new state-of-the-art facility that will foster the development, training and adoption of new techniques and technologies as they apply to gastroenterological endoscopic management of digestive and related disorders.”

ASGE has been providing learning opportunities at its current Institute for Training & Technology (IT & T) in Oak Brook, Ill. The new facility will be situated on a 3.5-acre plot in Chicago’s Downers Grove suburb, close to both O’Hare and Midway airports, and will serve as the global home of endoscopy, offering a full range of medical training and continuing medical education (CME).

“We are very excited and proud to support and partner with the ASGE in their exemplary global initiative,” stated Keiichi Nagata, president, FUJIFILM Medical Systems U.S.A., Endoscopy Division. “As a global leader in endoscopy, our mission is to advance the quality of life for people worldwide and to provide the endoscopic equipment and technology to that end. This state-of-the-art facility will certainly promote excellence in training and education for the GI community and ultimately improve the practice for healthcare professionals worldwide and the standard of care for the patients they treat.”

The new facility will offer:

• Significantly enhanced laboratory facilities that will house up to 16 endoscopy towers and other medical equipment to provide training simulations using the latest equipment and technologies
• Advanced training models and simulators
• A 100-seat auditorium with a built-in audience-response system
• In-house DVD authoring and rapid duplication capabilities
• Additional conference space and breakout rooms
• The capability to send and receive live satellite transmissions anywhere in the world, including endoscopic instruction and demonstration techniques as well as didactic lectures on research and educational findings
• The potential to access live and/or recorded institute hands-on and didactic courses via video streaming technology or the ASGE-controlled digital resource library
• The ability for domestic and international faculty to participate in courses on site or via satellite to teach cutting-edge techniques live to anyone, anywhere in the world
• A residence for international members to extend training while in the U.S. attending DDW® or other meetings, allowing them to learn and practice techniques that are not standard in their regions of the world

ASGE and the ASGE Foundation promote ongoing research in gastrointestinal endoscopy and its applications to disease management and prevention to ultimately improve the quality of endoscopy delivered to patients. The ASGE Foundation also funds programs designed to improve physician training and foster career development as well as supports important educational initiatives aimed at explaining the role of endoscopy in digestive health to the public. The IT & T Capital Campaign has raised funds from ASGE members and corporate partners, and the campaign is at 90 percent of its $6 million fundraising goal.

To learn more about the IT & T Capital Campaign, visit www.asge.org/ITTCampaign.
MEETINGS CALENDAR

March 9, 2012
ASGE - Improving Quality and Safety in Your Endoscopy Unit
Scottsdale, AZ. ASGE has developed this course to educate physician and non-physician unit staff on how to translate quality concepts into practice at their endoscopy unit. The content of the course is dynamic, addressing the fundamentals of quality and safe practice as well as emerging trends and evidence. Topics include: defining and measuring quality in endoscopy, recommendations for improving the quality in endoscopy units, a review of ASGE and CDC quality-related guidelines, and reprocessing. In addition to advancing their knowledge in endoscopy unit quality and safety, participants in this course will be prepared to apply for the ASGE Endoscopy Unit Recognition Program or renew their current participation. For additional information please call: 630-573-0600 Or email: education@asge.org

May 18-23, 2012
SGNA 39th Annual Course
Phoenix, AZ. The Society of Gastroenterology Nurses and Associates 39th Annual Course is a chance for you to join and collaborate with your fellow GI/endoscopy professionals, resulting in professional growth and development. Learn more about the following opportunities you can take advantage of: Unique networking opportunities, Exciting general sessions, Business meetings and ABCGN certification. SGNA is a professional organization of nurses and associates dedicated to the safe and effective practice of gastroenterology and endoscopy nursing. SGNA carries out its mission by advancing the science and practice of gastroenterology and endoscopy nursing through education, research, advocacy, and collaboration, and by promoting the professional development of its members in an atmosphere of mutual support. For more information visit: www.sgna.org

May 19-22, 2012
Digestive Disease Week
San Diego Convention Center, San Diego, CA. DDW is the largest international gathering of physicians, researchers and academics in the fields of gastroenterology, hepatology, endoscopy and gastrointestinal surgery. An average of 15,000 medical professionals attend the meeting each year. Jointly sponsored by the American Association for the Study of Liver Diseases (AASLD), the American Gastroenterological Association (AGA), the American Society for Gastrointestinal Endoscopy (ASGE) and the Society for Surgery of the Alimentary Tract (SSAT), DDW showcases thousands of abstracts and hundreds of lectures on the latest advances in GI research, medicine and technology. For more information visit: www.ddw.org
PRACTICAL GASTROENTEROLOGY CROSSWORD PUZZLE

by Myles Mellor

DOWN
1 Relating to bile production
2 Whiteness
3 Prefix with centric
4 For example, briefly
5 Swelling reducer
7 ____gastric
8 Harmful
10 Inflammatory condition of the small intestine and colon, abbr.
12 After expenses
13 Significant advances (2 words)
16 Systematic classification or orderly arrangement
17 Provide with financing
19 Compound from ammonia
20 Consumes
21 Continuous bladder irrigation, for short
22 ___ meal
25 Milliampere, for short
26 Where gallstones are found, abbr.
27 Roman 9
28 A nucleotide monophosphate
32 Adenosine triphosphate, for short
34 “This ___ test”
35 Small intestine division
37 Holding device
39 Flow
41 Mean arterial pressure, for short
43 Genetic info carrier
44 Model
46 Reappear
47 Exhibition
49 “Body clock” with rhythm
51 Biology lab supply
53 Slangy affirmative
54 Bile duct ____
56 Endoscopic ultrasound, for short
57 Ear section

ACROSS
1 Daily starting and stopping of parental nutrition increases the risk of this
6 Used when enteral nutrition is impossible or inadequate
9 Affecting the lungs
11 The V in VTE
14 Former
15 ____logy, study of ear diseases
18 Substance used to increase urine flow
22 ____ meal
25 Milliampere, for short
26 Where gallstones are found, abbr.
27 Roman 9
28 A nucleotide monophosphate
30 Class of fatty substances
32 Adenosine triphosphate, for short
34 “This ___ test”
35 Small intestine division
37 Holding device
39 Flow
41 Mean arterial pressure, for short
43 Genetic info carrier
44 Model
46 Reappear
47 Exhibition
49 “Body clock” with rhythm
51 Biology lab supply
53 Slangy affirmative
54 Bile duct ____
56 Endoscopic ultrasound, for short
57 Ear section

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