

## Computed Tomography Colonography in Colorectal Cancer

According to a June issue of the *Journal of the American Medical Association*, researchers at the Institute for Cancer Research and Treatment in Turin, Italy led a multicenter, cross-sectional study to evaluate the accuracy of computed tomography colonography for the detection of advanced colorectal neoplasia in asymptomatic individuals at high risk of colorectal cancer due to history of advanced neoplasia in first-degree relatives, personal history of colorectal adenomas, or positive findings from fecal occult blood tests (FOBTs). Each patient underwent computed tomography colonography followed by colonoscopy on the same day. The study was conducted in 11 Italian centers and 1 Belgian center between December 2004 and May 2007, with unblinded colonoscopy as the reference standard. The main outcome measures were sensitivity and specificity of computed tomography colonography in identifying advanced neoplasia (ie, advanced adenoma or colorectal cancer) 6 mm or larger.

The final analysis of the study examined 937 patients among the total 1,103 study participants, which included 373 patients in the family-history arm, 343 patients in the personal-history arm, and 221 patients in the FOBT-positive arm. Overall, the authors found that computed tomography colonography detected advanced neoplasia (6 mm or larger) in 151 of 177 patients (sensitivity, 85.3%; 95% confidence interval [CI], 79.0–90.0%) and correctly classified findings as negative for 667 of 760 patients without such lesions (specificity, 87.8%; 95% CI, 85.2–90.0%). Positive and negative predictive values were 61.9% (95% CI, 55.4–68.0%) and 96.3% (95% CI, 94.6–97.5%), respectively; after stratifying the arms, a significantly lower negative predictive value was identified in the FOBT-positive arm (84.9%; 95% CI, 76.2–91.3%;  $P<.001$ ).

## Rebound Acid Hypersecretion and Proton Pump Inhibitor Dependency

The July issue of *Gastroenterology* included results of a study examining whether rebound acid hypersecretion (RAHS) induces acid-related symptoms and leads to proton pump inhibitor dependency. Researchers at Copenhagen University in Copenhagen, Denmark conducted this randomized, double-blind, placebo-controlled trial with 120 healthy volunteers who were randomized to 12 weeks of placebo or 8 weeks of esomeprazole 40 mg daily followed by 4 weeks of placebo. The Gastrointestinal

Symptom Rating Scale (GSRS) was completed weekly for each patient, and clinically relevant acid-related symptoms were considered as any score of greater than 2 on a question regarding heartburn, acid regurgitation, or dyspepsia.

The authors noted that there were no significant differences in GSRS scores at baseline between the two arms. However, GSRS scores for acid-related symptoms were significantly higher in the proton pump inhibitor arm at Week 10 ( $1.4\pm 1.4$  vs  $1.2\pm 0.9$ ;  $P=.023$ ), Week 11 ( $1.4\pm 1.4$  vs  $1.2\pm 0.9$ ;  $P=.009$ ), and Week 12 ( $1.3\pm 1.2$  vs  $1.0\pm 0.3$ ;  $P=.001$ ). Forty-four percent (26/59) of patients in the proton pump inhibitor arm noted at least 1 relevant acid-related symptom during Weeks 9–12 compared to 15% (9/59;  $P<.001$ ) in the placebo arm. In the proton pump inhibitor arm, patients noting the symptoms of dyspepsia, heartburn, or acid regurgitation totaled 22% (13/59) at Week 10, 22% (13/59) at Week 11, and 21% (12/58) at Week 12, compared to 7% at Week 10 ( $P=.034$ ), 5% at Week 11 ( $P=.013$ ), and 2% at Week 12 ( $P=.001$ ), respectively, in the placebo arm. The authors concluded that treatment with proton pump inhibitors for 8 weeks induces acid-related symptoms in healthy volunteers after withdrawal and that this study reveals unrecognized aspects of proton pump inhibitor withdrawal and supports the hypothesis that RAHS has clinical implications.

## Donor Livers With Steatosis in Hepatitis C Virus-Positive Recipients

Researchers at the University of Padova in Padova, Italy conducted a study, the results of which were published in the June issue of *Liver Transplantation*, to evaluate the effects of donor graft steatosis on long-term liver histology following liver transplantation. The patient population involved 116 consecutive liver transplant recipients, comprised of 56 hepatitis C virus (HCV)-positive patients and 60 HCV-negative patients. The liver transplant recipients underwent protocol liver biopsies at 6, 12, 24, and 36 months after transplantation, and liver biopsies were obtained from all grafts.

Steatosis was not visible in 50.9% of the biopsies obtained at the back table prior to transplantation. In contrast, steatosis was mild in 39.6% of the samples, and moderate/severe in 9.5%. Stage 3 fibrosis was detected in 22.2% of those with HCV and stage 4 fibrosis in 2.2% of 45 biopsies 36 months after liver transplantation in patients with HCV. Regardless of the etiology of liver disease, no correlation was noted between donor graft steatosis and fibrosis after liver transplantation. In addi-

tion, there was no difference in 36-month survival rates after transplantation, regardless of whether the etiology of the liver disease was HCV-related or not (80.3% vs 75%;  $P=.4$ ) and whether the steatosis in the graft was absent, mild, or moderate/severe (79.7% vs 73.9% vs 81.1%;  $P=.7$ ). The authors concluded that almost one quarter of HCV-positive recipients have precirrhosis or cirrhosis 3 years after liver transplantation and that steatotic grafts do not appear to exacerbate fibrosis progression in patients with HCV or negatively affect 3-year patient survival rates.

### Low Serum Albumin Gradient Ascites in Patients With Cirrhosis

A serum-ascites albumin gradient (SAAG) level of less than 1.1 g/dL is usually considered the result of nonportal hypertension, even though the predictive value of low SAAG in cirrhosis patients with high pretest probability of portal hypertension is unclear. During a 5-year period at a large Veterans Affairs medical center, Hashem B. El-Serag, MD, and colleagues at the Baylor College of Medicine in Houston, Texas identified patients with a SAAG level of less than 1.1 g/dL ( $n=92$ ; 76 with cirrhosis and 16 without cirrhosis). In this study, the results of which were published in the June issue of the *American Journal of Gastroenterology*, cirrhosis was defined by clinical, histologic, and radiologic features, and nonportal hypertension causes of low SAAG were identified (including bacterial peritonitis, peritoneal carcinomatosis, nephrogenous ascites, tuberculous peritonitis, chylous ascites, and pancreatic ascites).

According to the authors, only 29 (38%) of the 76 patients with cirrhosis had an identifiable cause, most commonly primary bacterial peritonitis (11; 38%), followed by peritoneal carcinomatosis or malignant ascites (8; 28%) and nephrotic syndrome (5; 17%). Forty-seven cirrhosis patients had a low SAAG with an unidentifiable etiology.

Thirty-three patients underwent a repeat paracentesis, which increased the SAAG of 24 (73%) patients. In contrast, significantly lower SAAGs (0.66 vs 0.81) were found in the 16 patients without cirrhosis, and an identifiable cause of ascites was found in most of the patients without cirrhosis (12; 75%). The authors concluded that the assessment of a SAAG less than 1.1 g/dL in cirrhosis patients had a low yield and was less likely to be helpful than in patients without cirrhosis and that a repeat paracentesis was recommended as part of the work-up. They also noted the need for further studies of low SAAG cut-offs.

### Proton Pump Inhibitors and the Risk of *Clostridium difficile* Outbreak

Researchers at three Canadian centers conducted a retrospective case-control study to evaluate the asso-

ciation between current proton pump inhibitor use and *Clostridium difficile*-associated disease (CDAD) outbreak. Secondary objectives of the study included the assessment of the relationships between CDAD outbreak and past use of proton pump inhibitors; antibiotic use; diabetes mellitus; enteral feeds; cancer; gastrointestinal surgery; inflammatory bowel disease; and institutionalization. (Current use was defined as use at the time of the positive *C. difficile* diagnosis. Past use was defined as use in the past 30 days.) In this study, the results of which were presented at the 26th International Congress of Chemotherapy and Infection, held recently in Toronto, Canada, 142 consecutive hospital-acquired *C. difficile* cases were matched one-to-one to a control patient for age, sex, date of hospitalization, and hospital unit.

The authors found no association between the current use of proton pump inhibitors and CDAD outbreak (odds ratio [OR], 1.0; 95% CI, 0.99–1.01), as well as between CDAD outbreak and gastrointestinal surgery, enteral feeds, diabetes, cancer, inflammatory bowel disease, or institutionalization. In contrast, a positive correlation with the development of CDAD was demonstrated with antibiotic use within 30 days (OR, 12.0; 95% CI, 4.0–35.7) and past use of a proton pump inhibitor (OR, 2.4; 95% CI, 1.4–4.3).

#### In Brief

**According to an analysis of a historical cohort followed for 5 years after initiation of infliximab for active Crohn's disease, the combination of maintenance infliximab and an immunomodulator produced modest improvements in outcomes beyond maintenance infliximab alone.** *Dig Dis Sci.* 2009 Jun 18. [Epub ahead of print].

**Researchers conducted a retrospective analysis from the Organ Procurement and Transplantation Network database that found a synergistic interaction between donor risk index (DRI) and recipient HCV status, such that an allograft from a high-DRI donor more adversely affected the outcome of an HCV-positive recipient than that of an HCV-negative recipient.** *Liver Transpl.* 2009;15:592-599.

**In a prospective randomized, controlled trial, the addition of vitamin C to the *Helicobacter pylori* treatment regimen of amoxicillin, metronidazole, and bismuth significantly increased the *H. pylori* eradication rate.** *Dig Liver Dis.* 2009 Jun 1. [Epub ahead of print].