

News From DDW

By Christina Lesica

The following studies were presented at the Digestive Disease Week (DDW) 2008 meeting, held in San Diego, California, May 17–22, 2008. Look for commentary by editorial board members on selected DDW presentations in an upcoming issue of *Gastroenterology & Hepatology*.

Interval Between Completion of Bowel Preparation and Colonoscopy As Predictor of Bowel Preparation Quality

Researchers, led by Ali Siddiqui, MD, of the University of Texas Southwestern Medical Center in Dallas, Texas, evaluated whether the duration of the interval from the completion of bowel preparation to the start of colonoscopy affects the quality of the bowel preparation. This prospective study examined 378 consecutive outpatients (95.7% men; mean age, 62.2 years) who underwent colonoscopy at a Veterans Affairs medical center over a 3-month period. The following information was recorded prior to colonoscopy: medical history, demographics, compliance with bowel preparation and dietary restrictions, and the time since the last dose of the bowel preparation. Patients with a right hemicolectomy were excluded. Senior endoscopists and endoscopy nurses independently graded the quality of the bowel preparation for the right colon on a standardized 5-point scale (from 0=excellent to 4=inadequate). Endoscopists also noted whether succus was found in the right colon. Of the 378 patients, 97.3% received polyethylene glycol electrolyte–based solution and 2.7% received oral sodium phosphate.

According to the investigators, in patients who received preparations graded as excellent/good, the interval between the last dose of bowel preparation and the start of colonoscopy was significantly shorter than in patients whose preparations were graded as fair/poor/inadequate ($P=.013$). In contrast, no significant difference was detected in bowel preparation quality between colonoscopies performed in the morning versus those performed in the afternoon, unlike earlier studies that have suggested that the time of day is an important factor in the quality of bowel preparation. In addition, there was no significant relationship between succus and the interval from the last dose of bowel preparation or between the quality of bowel preparation and the interval from the last solid meal to the start of colonoscopy. There was good interobserver agreement between endoscopists and nurses in terms of grading the quality of the bowel preparations with the 5-point scale (Pearson correlation coefficient of 0.74). The authors concluded that the interval from the comple-

tion of bowel preparation to the start of colonoscopy appeared to be a more important predictor of bowel preparation quality than the time of day that the colonoscopy is performed. The authors also noted that the study was limited by its use of a bowel preparation that is more intensive than that typically used in colonoscopy and the fact that the study examined only patients at a Veterans Affairs medical center, which is not necessarily representative of a typical colonoscopy patient population.

The Use of Nonsteroidal Anti-Inflammatory Drugs to Prevent Post-Endoscopic Retrograde Cholangiopancreatography Pancreatitis

B. Joseph Elmunzer, MD, and colleagues at the University of Michigan Medical Center, in Ann Arbor, Michigan, conducted a meta-analysis to evaluate the prophylactic effect of nonsteroidal anti-inflammatory drugs (NSAIDs) on post-endoscopic retrograde cholangiopancreatography pancreatitis (PEP), as various clinical trials have yielded statistically conflicting results. Two independent reviewers conducted searches of MEDLINE, EMBASE, meeting abstracts, and bibliographies to identify prospective randomized controlled trials (RCTs) investigating the effects of prophylactic NSAIDs on PEP.

Four RCTs, comprising 879 patients, were identified. A subsequent meta-analysis of these RCTs revealed the pooled relative risk of PEP following prophylactic use of NSAIDs to be 0.35 (95% confidence interval [CI], 0.21–0.59). The pooled relative risk of developing moderate-to-severe PEP following prophylactic NSAID use was 0.1 (95% CI, 0.01–0.76), and the pooled number needed to treat with NSAIDs for the prevention of 1 pancreatitis episode was 15 patients. No significant adverse events were reported. The authors noted that one limitation of the meta-analysis was that the RCTs demonstrated clinical heterogeneity, as two studies examined high-risk patients, whereas the other two studies examined general populations undergoing endoscopic retrograde cholangiopancreatography. Another point of heterogeneity involved the type of NSAID: two studies used diclofenac, whereas the other two studies used indomethacin.

However, there was no significant statistical heterogeneity ($P=.62$) in clinical outcomes. The researchers concluded that prophylactic NSAIDs were efficacious and safe for the prevention of PEP and that widespread prophylactic use of NSAIDs would significantly reduce PEP and result in clinical and economic benefits.

Confocal Laser Endomicroscopy in Barrett Esophagus and Associated Neoplasia

Researchers, led by Kerry B. Dunbar, MD, of the Johns Hopkins University School of Medicine in Baltimore, Maryland, sought to determine whether confocal laser endomicroscopy (CLE) with optical biopsy and targeted mucosal biopsy enhanced the diagnostic yield and localization of Barrett esophagus (BE)-associated neoplasia compared to standard endoscopy (SE) with a 4-quadrant random biopsy (RB) protocol. BE patients undergoing surveillance (Group 1) and patients with suspected nonlocalized high-grade dysplasia (HGD; Group 2) underwent CLE and SE-RB in a randomized fashion. Patients with esophageal cancers and fluorescein allergy were excluded. One endoscopist performed all fluorescein-aided CLE following SE of the esophagus. The lesions were examined after the 4-quadrant optical biopsies, and targeted mucosal biopsies were obtained only if in-vivo CLE suggested HGD/cancer using Mainz confocal Barrett classification. A second endoscopist performed SE and obtained biopsies from lesions and each quadrant of BE every 2 cms (Group 1) or 1 cm (Group 2). Endoscopists were blinded to the results of outside esophagogastroduodenoscopy and the first endoscopy, and a blinded gastrointestinal pathologist reviewed all biopsies. Signed-rank and McNemar tests were used to analyze the diagnostic yield, biopsy number, and final diagnosis for the two groups.

The authors reported that 30 patients have been enrolled thus far in this ongoing study and complete data are available for 23 patients (82.6% men; mean age, 64 years; mean BE length, 5.9 cm; range BE length, 2–11 cm), of whom 11 are in Group 1 and 12 are in Group 2. The diagnostic yield for neoplasia was significantly greater in Group 2 due to a decrease in the number of biopsies obtained during CLE compared to SE-RB. Similarly, in Group 1, there was a significant decrease in the mean number of mucosal biopsies obtained during CLE compared to SE-RB due to in-vivo imaging and targeted biopsy (0.5 vs 11.9 biopsies, respectively; $P=.004$). A comparable number of patients were diagnosed with HGD ($n=9$) via CLE with targeted biopsy and SE-RB ($P=1.0$). One additional case of flat BE-HGD was diagnosed by CLE but missed by SE-RB. With CLE, HGD was localized to specific sites in BE, rather than a specific level, as in SE-RB. The authors concluded that these pre-

liminary data suggested that in vivo fluorescein-CLE with targeted biopsy significantly improved the diagnostic yield of surveillance endoscopy and allowed for better localization of HGD in BE patients compared to SE-RB.

Virologic Responses in Treatment-naive Latinos Infected With Hepatitis C Virus Genotype 1

As Latino patients have been underrepresented in hepatitis C virus (HCV) trials and undertreated in clinical practice, Maribel Rodriguez-Torres, MD, of the Fundacion de Investigacion de Diego in Puerto Rico, and colleagues initiated the prospective, multicenter, open-label LATINO study to compare the responses of treatment-naive HCV genotype 1-infected Latino and non-Latino Caucasians when treated with peginterferon alfa-2a/ribavirin. The authors hypothesized that sustained virologic response (SVR) in Latino patients would be no more than 15% lower than that of non-Latino patients. All patients in the study received the same treatment: 180 μ g weekly of peginterferon alfa-2a and 1,000–1,200 mg daily of ribavirin (based upon weight) for 48 weeks. The authors performed multiple logistic regression analysis with $P<.2$ to determine the effect of baseline factors, including ethnicity (non-Latino vs Latino), gender, age (≤ 40 vs >40 years), baseline alanine aminotransferase (ALT) quotient (≤ 3 vs $>3 \times$ upper limit of normal [ULN]), HCV RNA levels ($\leq 400,000$ vs $>400,000$ IU/mL), and cirrhosis classification (cirrhotic vs noncirrhotic), on SVR in the Latino and non-Latino groups, separately and in combination.

The intent-to-treat population was composed of 269 Spanish-speaking Latino patients whose parents and grandparents were Latinos and 300 non-Latino Caucasian patients. Higher percentages of the Latino group were 40 years of age or younger (28% vs 16%), had a body mass index of more than 27 kg/m² (65% vs 51%) and more than 30 kg/m² (40% vs 25%), had ALT levels exceeding $3 \times$ ULN (25% vs 17%), and had cirrhosis (13% vs 10%). Other baseline characteristics were similar between the groups. The SVR rate was significantly higher in the non-Latino group than in the Latino group (49% [148/300] vs 33% [90/269]; $P<.0001$). According to multiple logistic regression analysis, significant predictors of SVR in the Latino group included baseline ALT levels of no more than $3 \times$ ULN (odds ratio [OR], 1.7; 95% CI, 0.93–3.42; $P=.0797$), baseline HCV RNA levels of no more than 400,000 IU/mL (OR, 2.62; 95% CI, 1.29–5.33; $P=.008$), and noncirrhotic status (OR, 2.13; 95% CI, 0.89–5.19; $P=.0959$). Significant predictors of SVR in the non-Latino group included male gender (OR, 1.60; 95% CI, 0.97–2.62; $P=.0664$), ALT levels of more than $3 \times$ ULN (OR, 2.33; 95% CI, 1.20–4.53; $P=.0126$), and baseline HCV RNA levels of no more

than 400,000 IU/mL (OR, 3.11; 95% CI, 1.54–6.28; $P=.0016$). The authors concluded that virologic response rates to 48 weeks of treatment with peginterferon alfa-2a/ribavirin were lower in HCV genotype 1–infected Latino patients than in non-Latino Caucasian patients and that the predictors of SVR were differed between the groups, suggesting the need for further study in Latino patients.

Endoscopic Ultrasound in Pancreatic Cancer

Ananya Das, MD, of the Mayo Clinic in Scottsdale, Arizona, and colleagues evaluated the association of receiving endoscopic ultrasound (EUS) with survival in patients with pancreatic adenocarcinoma. The researchers searched the linked SEER-Medicare database between January 1994 and December 2002 to identify patients 66 years of age or older who had been recently diagnosed with pancreatic cancer. Demographic, cancer-specific, and EUS procedural information were noted and survival curves compared for patients who underwent EUS within 90 days of diagnosis (group I) to patients who had not

(group II). A Cox proportional hazards model was used to evaluate the independent association of EUS receipt and survival.

The authors identified 4,236 patients with loco-regional pancreatic adenocarcinoma, of whom only 535 (12.6%) received evaluation via EUS. Median survival was 9 months (interquartile range [IQR], 4–17) in group I and 5 months (IQR, 2–11) in group II ($P<.0001$). A larger proportion of patients had regional disease in group I compared to group II (81% vs 75%; $P<.01$). Curative intent surgery (23% vs 10%; $P<.001$) and radiation treatment (18% vs 11%; $P<.001$) were also performed more frequently in group I. Adjusted for age at diagnosis, race, gender, comorbidity score, and tumor stage, receipt of EUS was an independent predictor of improved survival (relative hazard, 0.82; 95% CI, 0.73–0.90). The authors concluded that this study is the first to demonstrate the association of EUS evaluation with improved outcome in pancreatic cancer patients, possibly due to detection of cancer at an earlier stage or improved stage-appropriate management, such as more selective performance of curative intent surgery.