By Dee Rapposelli

Highlights From Digestive Disease Week

Rectal Indomethacin Is Useful for Prevention of Post–Endoscopic Retrograde Cholangiopancreatography Pancreatitis

The most common major complication occurring after endoscopic retrograde cholangiopancreatography (ERCP) is acute pancreatitis. Two studies presented at Digestive Disease Week, which took place May 19–21, 2013 in Orlando, Florida, suggest that rectal indomethacin may be of benefit. One Canadian study, reported by Mohammad Yaghoobi, MD, of the McGill University Health Center in Montreal, Quebec, consisted of a meta-analysis of randomized controlled trials (RCTs) that compared rectal indomethacin with placebo.

The multicenter research team performed a literature search for RCTs that compared either pre- or post-ERCP rectal indomethacin prophylaxis for pancreatitis with placebo. Four of 61 studies, published between 2007 and 2012 (n=1,470), were included in the meta-analysis. All trials used relatively similar criteria to diagnose pancreatitis, and they all consistently showed an association between rectal indomethacin and lower rates of pancreatitis post-ERCP compared with placebo.

The cumulative rate of pancreatitis for indomethacin and placebo was 7% and 12%, respectively (odds ratio [OR]=0.49 [0.34–0.71]; *P*=.0002). Similar results were seen when a trial that exclusively looked at high-risk patients was excluded from the analysis (OR=0.49 [0.28–0.85]; *P*=.01).

Another study, conducted by a team from the Digestive Disease Research Center–Tehran University of Medical Sciences in Tehran, Iran and the American University of Beirut School of Medicine in Beirut, Lebanon, evaluated whether the efficacy of rectal indomethacin could be enhanced with sublingual nitrates to prevent post-ERCP pancreatitis. This double-blind, placebo-controlled, randomized trial was comprised of 300 patients who underwent ERCP over a 14-month period. Patients either received a suppository containing 100 mg of indomethacin plus 5 mg sublingual nitrate (n=150) or a suppository containing 100 mg of indomethacin plus sublingual placebo (n=150) before ERCP.

Pancreatitis developed in 10 (7%) patients receiving sublingual nitrates and 23 (15%) patients receiving placebo (*P*=.016). No risk factors for development of pancreatitis were identified in either group, and the severity of pancreatitis did not differ between the groups. The findings suggest that the benefit of rectal indomethacin as a prophylactic measure against post-ERCP pancreatitis can be enhanced by the addition of sublingual nitrates.

Colonoscopy Screening Decreases the Risk of Colorectal Cancer in Persons Age 76–85 Years

Although the US Preventive Services Task Force discourages routine colorectal cancer (CRC) screening in persons age 76–85 years, Yize R. Wang, MD, of the Cooper University Hospital in Camden, New Jersey and colleagues from the Mayo Clinics in Jacksonville, Florida and Rochester, Minnesota sought to determine whether an association exists between colonoscopy and a decreased risk of CRC in patients in this age group. Wang presented findings of a Surveillance, Epidemiology and End Results Medicare (SEER-Medicare) database review at Digestive Disease Week, which took place May 19–21, 2013 in Orlando, Florida.

Using the Medicare 5% random sample of the SEER-Medicare database, the team identified all patients who were age 76–85 years at their first outpatient colonoscopy during 1998–2002. Medicare HMO enrollees; patients lacking Medicare Part B coverage in the 24 months prior to colonoscopy; patients who had had prior flexible sigmoidoscopy; and patients with inflammatory bowel disease, family history of CRC, or personal history of colon polyps were excluded from the study analysis. Using the Kaplan-Meier method, the cumulative incidence of CRC was estimated and compared with incidence in a control group. All patients were followed until a diagnosis of CRC or carcinoma in situ was made or until death or else up to December 31, 2005.

CRC was diagnosed in 379 (1.6%) of the 24,437 patients in the control group and 37 (0.7%) of 5,701 patients in the colonoscopy group (*P*<.001). The cumulative incidence of both distal and proximal CRC was significantly lower in the colonoscopy group compared with the control group. The 5-year incidence of distal CRC was 0.26% versus 0.77%, respectively, and the 5-year incidence of proximal CRC was 0.43% versus 0.79% (*P*<.05). Multivariate Cox analysis confirmed that colonoscopy was associated with a decreased risk of CRC (hazard ratio, 0.42; 95% confidence interval, 0.28–0.65). The researchers concluded that colonoscopy screening in persons age 76–85 years is of value and associated with a decreased risk of both distal and proximal CRC.

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Highlights From EASL 2013

Urinary Metabolites May Provide Greater Diagnostic Accuracy than Alpha-Fetoprotein in Screening for Hepatocellular Carcinoma

Detection of hepatocellular carcinoma (HCC) is challenging, and diagnostic screening tools that provide better sensitivity and specificity than serum alpha-fetoprotein (AFP) are needed. Preliminary findings, reported by Nimzing G. Ladep, MBBS, of the Imperial College London in the United Kingdom at the 48th annual meeting of the European Association for the Study of the Liver, which took place April 24–28, 2013 in Amsterdam, The Netherlands, suggest that urinary metabolites may be a suitable diagnostic tool for detection of HCC.

Dr. Ladep and colleagues used nuclear magnetic resonance spectroscopy to acquire 1-dimensional spectral data from the urine samples of 65 patients with HCC, 36 with cirrhosis, 110 with noncirrhotic liver disease, and 91 healthy controls. The diagnostic accuracy of the metabolic profiles and the unique metabolic profiles that distinguish HCC from cirrhosis, noncirrhotic liver disease, and normal liver function were examined using area-under-the-receiver operating characteristic curves.

A distinct metabolic profile for the urine of patients with HCC was identified. The metabolites that were significantly increased ($P<.001$) in patients with HCC compared with patients in the other groups studied were methionine, acetylcarnitine, carnitine, 2-oxoglutarate, indole-3-acetate, and creatine. In addition, creatinine, citrate, 4-cresol sulfate, and trimethylamine N-oxide were significantly lower in patients with HCC than in controls. Sensitivity and specificity (95% confidence interval) of urinary metabolites were 87% and 81%, respectively, in distinguishing HCC from cirrhosis, 86% and 93%, respectively, in distinguishing HCC from noncirrhotic liver disease, and 97% and 99%, respectively, in distinguishing HCC from normal liver function. These parameters were higher than those associated with AFP and suggest that urinary metabolic profiling is a potential screening tool for HCC.

Phosphorus Magnetic Resonance Spectroscopy Shows Promise for Diagnosis of NASH

A noninvasive strategy to distinguish steatosis from nonalcoholic steatohepatitis (NASH) was described by Jill M. Abrigo, MD, of The Chinese University of Hong Kong in Shatin at the 48th annual meeting of the European Association for the Study of the Liver, which took place April 24–28, 2013 in Amsterdam, The Netherlands. She and colleagues evaluated the ability of phosphorus magnetic resonance spectroscopy (31P-MRS) to diagnose NASH in 132 patients with biopsy-proven nonalcoholic fatty liver disease (NAFLD).

The total study cohort included 19 controls, 37 patients with non-NASH NAFLD, and 95 patients with NASH. 31P-MRS was performed in all 151 patients. Signal intensity ratios for phosphomonoesters (PME), phosphodiesters (PDE), total adenosine triphosphate (ATP), and inorganic phosphate, expressed in relation to [PME+PDE] or total phosphate (TP) were obtained.

Compared with controls, patients with NAFLD were characterized by increased [PME+PDE]/TP and PDE/TP. Patients with NASH were characterized by decreased total ATP/TP and alpha-ATP/TP but normal PME/[PME+PDE] and glycerophosphocholine/[PME+PDE]. In contrast, patients with non-NASH NAFLD were characterized by normal ATP/TP and alpha-ATP/TP, decreased PME/[PME+PDE], and increased glycerophosphocholine/[PME+PDE].

The findings, thus, suggest that 31P-MRS provides fair, noninvasive diagnostic accuracy for NASH.