

Preventing Recurrent Hepatitis B Virus Infection After Liver Transplant

Researchers from the Australasian Liver Transplant Study Group and Auckland City Hospital, New Zealand, recently conducted a retrospective study examining the long-term safety and efficacy of low doses (400–800 IU/month) of intramuscular (IM) hepatitis B immunoglobulin (HBIG) plus lamivudine to prevent recurrent hepatitis B virus (HBV) infection after liver transplantation. The study included 147 patients (median age, 49; 86% men; 39% Asian; 28% Polynesian) with acute or chronic HBV infection who received liver transplants between 1996 and 2004.

Prior to transplantation, 31% of the patients were hepatitis B e antigen–positive, 5% of patients were coinfecting with hepatitis D virus, 3% were coinfecting with hepatitis C virus (HCV), and 42% had hepatocellular carcinoma. In addition, 85% of patients had detectable serum HBV DNA levels pretransplantation and received 100 mg daily of lamivudine treatment (median, 92 days; range, 1–1,775 days).

Post-transplantation, all patients received 100 mg daily of lamivudine plus 400 or 800 IU daily of IM HBIG for 1 week and then monthly. Measurements of serum HBV DNA levels were taken prior to lamivudine administration, at transplantation, and at 12 months post-transplantation, whereas measurements of serum titers of antibody to hepatitis B surface antigen were taken at 1, 3, and 12 months post-transplantation. Median follow-up was 62 months.

Kaplan-Meier analysis revealed patient survival rates of 92% at 1 year and 88% at 5 years. The actuarial risk of HBV reinfection was 1% at 1 year and 4% at 5 years. All 5 patients with HCV became reinfected with HBV 6–19 months post-transplantation and became lamivudine-resistant. Researchers concluded that low-dose IM HBIG plus lamivudine was safe and efficacious as long-term prophylaxis against recurrent HBV post-transplantation, at an estimated cost of less than 10% of the standard and expensive high-dose regimen of HBIG.

Sequential Therapy Versus Standard Therapy for *Helicobacter pylori* Infection

A study published in a recent issue of *Annals of Internal Medicine* investigated whether sequential therapy is more effective at eradicating *Helicobacter pylori* infection than standard triple-drug therapy in adults with dyspepsia or peptic ulcers. Researchers from the University of Bologna,

Italy, conducted a randomized, double-blind, placebo-controlled trial in 300 patients with dyspepsia or peptic ulcers between September 2003 and April 2006. *H. pylori* infection was confirmed by upper endoscopy and urea breath testing.

Patients were randomized to receive either a 10-day sequential therapy regimen (40 mg of pantoprazole, 1 g of amoxicillin, and placebo, each administered twice daily for the first 5 days, followed by 40 mg of pantoprazole, 500 mg of clarithromycin, and 500 mg of tinidazole, each administered twice daily for the remaining 5 days) or a 10-day standard therapy regimen (40 mg of pantoprazole, 500 mg of clarithromycin, and 1 g of amoxicillin, each administered twice daily). Follow-up breath testing was conducted at 4 and 8 weeks following therapy, and negative results signified eradication.

The sequential regimen achieved a significantly greater eradication rate than standard therapy in intention-to-treat analysis (89% vs 77%, $P=.0134$; difference, 12% [95% confidence interval {CI}, 3–20%]), modified intention-to-treat analysis (91% vs 78%, $P=.0022$; difference, 13% [95% CI, 5–21%]), and per-protocol analysis (93% vs 79%, $P=.0013$; difference, 14% [95% CI, 6–21%]). Among patients with clarithromycin-resistant strains of *H. pylori*, sequential therapy was significantly more effective (89% vs 29%, $P=.0034$), whereas among patients with metronidazole-resistant strains, both therapy regimens had similar eradication rates (97% vs 91%). Among patients with clarithromycin- and metronidazole-resistant strains, eradication was achieved by 0 of 4 sequential-therapy patients versus 2 of 7 standard-therapy patients.

PET/CT Monitoring in Crohn's Disease

Positron emission tomography/computed tomography (PET/CT) with the radiotracer fluorodeoxyglucose may be valuable as a means of noninvasive monitoring of Crohn's disease, according to a prospective study of 22 patients with Crohn's disease, which was presented at the 54th Annual Meeting of the Society of Nuclear Medicine held in Washington, DC and published in a recent issue of the *Journal of Nuclear Medicine*.

The study, led by Roland Hustinx, MD, University of Liège, Belgium, compared the use of PET/CT imaging with endoscopy as a first-step test in patients with clinical or biologic signs of active Crohn's disease. Patients underwent PET/CT, followed by ileocolonoscopy within 1 week (mean, 2 days). For each patient, the Crohn's disease activity index (CDAI) was calculated, and serum C-reactive

tive protein (CRP) and fecal calprotectin were measured before endoscopy.

Among the 22 patients, 95 intestinal and colonic segments were analyzed. PET/CT identified 35 of 48 endoscopically affected segments (sensitivity for the detection of endoscopic lesions, 72.9%). For identifying severe endoscopic lesions (including deep ulcers and strictures), the sensitivity of PET/CT detection was 100% (14/14). Global PET/CT score significantly correlated with the Crohn's disease endoscopy index of severity (CDEIS) (R=0.51; 95% CI, 0.09–0.77; P=.017), CDAI (R=0.58; 95% CI, 0.17–0.80; P=.005), and CRP (R=0.56; 95% CI, 0.19–0.81; P=.007).

"The advantage of PET/CT is that it is noninvasive, simple, fast, and without any side effects. There was no preparation for the patients, except that they fasted for 6 hours. Each study took less than 20 minutes," said Dr. Hustinx.

Folic Acid and the Risk Of Precancerous Colon Tumors

According to a study published in a recent issue of the *Journal of the American Medical Association*, folic acid supplements do not reduce the risk of developing precancerous tumors in the colon and may even increase the risk. The study, led by Bernard F. Cole, PhD, Dartmouth Medical School, examined nine clinical centers between 1996 and 2004 and 1,021 patients who had previously been treated for adenomas.

Patients were randomized to receive 1 mg of folic acid daily or placebo and then separately randomized to receive aspirin in doses of 81 or 325 mg daily or placebo. Researchers conducted follow-up colonoscopies at 3 years and then 3–5 years later. Results showed little difference between the number of tumors found in the folic acid arm and in the placebo arm. At the first follow-up, tumors were identified in 42.4% of patients in the placebo arm compared with 44.1% of patients in the folic acid arm. At the second follow-up, precancerous tumors were found in 37.2% of patients in the placebo arm compared with 41.9% of patients in the folic acid arm. However, higher rates of advanced tumors and multiple tumors were identified in patients in the folic acid arm, who were more than twice as likely as patients in the placebo arm to have 3 or more precancerous tumors. Patients in the folic acid group also had a higher rate of noncolorectal cancers, primarily prostate cancer. The researchers noted that the common practice of fortifying food with folic acid may have affected the results and that further research was required.

Capsule Endoscopy in Obscure Bleeding

The long-term diagnostic benefit, safety, and cost-effectiveness of capsule endoscopy (CE) in patients with obscure gastrointestinal bleeding (OGIB) was investigated by 53 Australian physicians who participated in a national registry established by the Gastroenterological Society of Australia and the Australian Capsule Endoscopy Interest Group. The findings were presented at the recent 6th International Conference on Capsule Endoscopy held in Madrid, Spain.

The study analyzed 2,949 CE procedures performed on patients who had previously undergone upper endoscopy and colonoscopy. The patients had undergone an average of 3.6 diagnostic procedures, including 1.6 endoscopies and 1.5 colonoscopies, prior to undergoing CE. The average cost of these procedures was \$3,282 in Australian dollars. In addition, 37% of patients required hospitalization in the year before they underwent CE.

The cost per patient decreased 21% during the study period. In a follow-up of 420 studies, the investigation costs decreased to \$324 in Australian dollars, and only 11% of patients required hospital admission.

In Brief

Three months of long-acting octreotide in selected cirrhotic patients with portal hypertension decreases the hepatic venous pressure gradient, independent of systemic hemodynamics and liver function. The decrease in vascular endothelial growth factor blood levels suggests an improvement in splanchnic hyperemia. (*Am J Gastroenterol.* 2007; [Epub ahead of print].)

In a randomized, double-blind, placebo-controlled pilot study of the use of rifaximin in the treatment of active pouchitis, clinical remission occurred more frequently in patients treated with rifaximin 400 mg three times daily than placebo, although the difference was not significant. Researchers noted that a larger trial is still required to determine whether rifaximin is effective for the treatment of active pouchitis. (*Inflamm Bowel Dis.* 2007; [Epub ahead of print].)

According to the results of a randomized trial, nonresponders with chronic hepatitis C may achieve a sustained virologic response rate of approximately 12% if re-treated with interferon induction treatment followed by administration of a daily dose. The addition of ribavirin or amantadine did not appear to improve the response rates in the study. (*J Gastroenterol.* 2007;42:362-367.)