'Optical Biopsy' Safe and Effective for Endoscopy

BY ROBERT FINN
San Francisco Bureau

SAN DIEGO — Two studies presented at the annual Digestive Disease Week indicate that confocal laser endoscopy increases diagnostic yield and is both accurate and safe.

The studies suggest that one day it may be possible to skip a step in the diagnosis and treatment of Barrett's esophagus, Dr. Kerry B. Dunbar said in a news conference. Dr. Dunbar was the senior author of the randomized study and a coauthor of the retrospective study.

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DR. DUNBAR

In confocal laser endoscopy (CLE), an endoscope is equipped with a microscope that magnifies living cells close to the surface of the GI tract 1,000 times. When used in conjunction with intravenous contrast agents such as fluorescein, acriflavine, and cresyl violet, the microscope allows endoscopists to visualize the abnormal cell growth characteristic of cancerous lesions.

In one study, investigators retrospectively combined the results of 2,102 CLE examinations on 1,771 patients at three academic medical centers. They found the "optical biopsy" technique to be 91% accurate, compared with standard biopsy. Moreover, the technique changed the initial diagnosis in 32% of the upper GI examinations and 22% of examinations of the lower GI tract.

The other study was a prospective, controlled, crossover trial in which 36 patients underwent both CLE and standard endoscopy (in random order and separated by 2-6 weeks) to identify areas of dysplasia in Barrett's esophagus. The two techniques uncovered about the same number of sites with high-grade dysplasia, but CLE required 60% fewer mucosal biopsies to do so.

Furthermore, 9 of 15 patients (60%) at high risk of high-grade dysplasia and 14 of 21 patients (67%) undergoing surveillance endoscopy following a Barrett's diagnosis required no mucosal biopsies at all during their CLE procedures, because the investigators detected no suspicious sites.

"One of the great promises of confocal microscopy is that we instantly get a diagnosis: 'Aha, here's the area of dysplasia. I'm going to do a mucosal resection now.' And the patient only gets one sedated procedure," said Dr. Dunbar of Johns Hopkins University, Baltimore.

Dr. Dunbar said she had no relevant conflicts of interest, but disclosed that one of the investigators in the retrospective study received unrestricted research funding from Pentax, which manufactures a CLE system. The randomized study was funded by the National Institutes of Health and by a research award from the American Society of Gastrointestinal Endoscopy. ■

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appearing well before histologic damage.

Dr. Mäki and his colleagues at Tampere and the University of Helsinki identified 23 patients out of 145 consecutive cases who had only intraepithelial lymphocytosis with or without crypt hyperplasia. These 23 patients were randomized either to a gluten-free diet or a normal diet. A year later, clinical, serologic, and histologic exams were repeated. Villous architecture had deteriorated, and symptoms and antibody titers were unchanged in the normal diet group.

Symptoms, antigluten antibodies, and mucosal inflammation were all significantly reduced in those who restricted gluten, Dr. Mäki said.

Dr. Mäki urged more studies before changing diagnostic criteria, but recommended considering celiac disease in all symptomatic patients and a trial of dietary restriction.

Dr. Green said that until a serum-based diagnostic test was available, intestinal biopsies were likely to remain the diagnostic standard.

Fewer than 5% of Americans with celiac disease have been diagnosed, Dr. Green estimated. "We're all looking for an easier way [than biopsy] to diagnose this disorder." ■