

The following abstracts, from medical journals containing literature on gastroesophageal reflux disease, were selected for their relevance to this Special Report.

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### Cost Advantages to Treating Noncardiac Chest Pain Empirically

For patients who present with noncardiac chest pain (NCCP), an esophageal source for the pain is not uncommon. Gastroesophageal reflux disease is most often identified as the source of these cases. Guidelines for diagnosing NCCP have been established by the American Gastroenterology Association, but they only address the currently available investigations and do not suggest a sequence or discuss empirical treatment of the reflux disease. This study is one of the first to address optimal management of NCCP. In this cost-effectiveness analysis, empirical antireflux therapy was compared with a decision tree (developed by a panel of internists and gastroenterologists) of existing diagnostic methodologies (ie, upper gastrointestinal tract series, endoscopy, manometry, 24-hour pH monitoring, and provocation tests). The results show that total medical costs with traditional investigations were \$2187 for 8 to 16 weeks versus \$849 for empirical treatment. The cost benefit extended up to 60 months, but most of the cost savings was realized early on and decreased after the first year.

Borzecki AM, Pedrosa M, Prashker MJ. Should noncardiac chest pain be treated empirically? A cost-effectiveness analysis. *Arch Intern Med* 2000;160:844-852.

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### Controlling Asthma With Antireflux Therapy

Up to 50% of patients with asthma have either endoscopic evidence of esophagitis or increased acid exposure as measured by 24-hour pH

monitoring. Thus, it is thought that antireflux therapy would ameliorate asthma symptoms and functional complications. This review of the literature analyzes and compares the effects of medical versus surgical antireflux therapy on asthma symptoms and function. It aims to answer 4 questions: 1) Does medical therapy improve asthma control?; 2) If yes, what is the optimal medication and dosage?; 3) Does antireflux surgery improve asthma control?, and 4) Is surgery superior to medical therapy? The data confirm previous analyses showing that surgical therapy offers significant improvement (in almost 90% of children and 70% of adults) in respiratory symptoms and notable improvement in objective measures of pulmonary function in 30% of patients. Medical therapy shows a much lower improvement rate in pulmonary function (15% of patients in half the studies analyzed) and modest improvements in asthma symptoms (improvement in 25% of patients in half of the studies).

Bowrey DJ, Peters JH, DeMeester TR. Gastroesophageal reflux disease in asthma: Effects of medical and surgical antireflux therapy on asthma control. *Ann Surg* 2000;231:161-172.

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### Successful Maintenance Therapy With Low-Dose Pantoprazole

The vast majority of gastroesophageal reflux disease patients (> 90%) can be healed with proton pump inhibitor therapy. However, unless maintenance treatment is provided, most patients (> 80%) will relapse in the first 6 to 12 months. Studies with low- and standard-dose omeprazole and lansoprazole have demonstrated the benefits of maintenance therapy (relapse rates between 15% and 45% after 12 months). This study evaluates pantoprazole 20 or 40 mg in 396 patients with healed reflux esophagitis (grade II or III before healing). The 20-mg dose proved to be "at least equiva-

lent" to the 40-mg dose in endoscopic (the primary efficacy parameter) and symptomatic (a secondary efficacy parameter) relapse over the 12-month evaluation period. Endoscopic relapse rates were 29% in the 20-mg group at 12 months versus 19% for the 40-mg group. For symptomatic relapse, the rates were 21% and 17%, respectively. Both doses were well tolerated.

Escourrou J, Deprez P, Saggiaro A, et al. Maintenance therapy with pantoprazole 20 mg prevents relapse of reflux oesophagitis. *Aliment Pharm Ther* 1999;13:1481-1491.

### Putting the Omeprazole Test to the Test

Traditionally, gastroesophageal reflux disease (GERD) is diagnosed by a response to antireflux pharmacotherapy because only approximately 50% of patients have endoscopic evidence of esophageal mucosal inflammation on endoscopy. However, up to half of patients treated empirically may be nonresponders and are referred for further diagnostic evaluation such as 24-hour pH monitoring (currently the gold standard), endoscopy, or response to high-dose proton pump inhibitor therapy (ie, "the omeprazole test"). This study of 35 patients with erosive esophagitis and heartburn is the first to directly compare the reliability and accuracy of 24-hour pH monitoring with the omeprazole test. Patients first underwent 24-hour pH monitoring, then the omeprazole test. In the omeprazole test, daily symptoms were monitored for 1 week (baseline) and repeated during the second week on therapy (40 mg qam and 20 mg at bedtime.). The results showed that the omeprazole test was at least as sensitive as pH monitoring in diagnosing GERD in patients with erosive esophagitis. This preliminary study suggests that the omeprazole

test could substitute for 24-hour pH monitoring (which is cumbersome for the patient) for diagnosing GERD, but further evaluation of its utility in primary care is required.

Fass R, Ofman JJ, Sampliner RE, Camargo L, Wendel C, Fennerty MB. The omeprazole test is as sensitive as 24-hr oesophageal pH monitoring in diagnosing gastro-oesophageal reflux disease in symptomatic patients with erosive esophagitis. *Aliment Pharm Ther* 2000;14:389-396.

### A Watchful Eye on Barrett's Esophagus

The management of Barrett's esophagus (BE) is undergoing revolutionary changes, including its definition, diagnosis, establishing the risk for adenocarcinoma, and treatment options. This paper reviews the structural changes observed with BE in endoscopy and discusses when endoscopy is appropriate. The relatively recent distinction between short- and long-segment BE is discussed, as are the possible ramifications of each type of BE. New techniques for identifying BE are reviewed (balloon cytology and laser-induced fluorescence spectroscopy during upper endoscopy). Surveillance and treatment issues are also analyzed. Surveillance can be a difficult issue in this patient population but the frequency should be determined by the degree of dysplasia identified. Current therapies include proton pump inhibitor (PPI) therapy (including high-dose PPIs) to control gastroesophageal reflux disease symptoms or antireflux therapy. New techniques, such as endoscopic ablation therapy, photodynamic therapy, and multipolar electrocautery, show promising results.

Morales T, Sampliner RE. Barrett's esophagus: Update on screening, surveillance, and treatment. *Arch Intern Med* 1999; 159:1411-1416.