

## Advances in the Treatment of GERD: A Managed Care Perspective

This Special Report supplement to *The American Journal of Managed Care* features the proceedings of a symposium on the treatment of gastroesophageal reflux disease (GERD) in a managed care environment, held on October 17, 1999, in Phoenix, Arizona. The meeting was chaired by M. Michael Wolfe, MD, Chief of Gastroenterology at Boston Medical Center and Professor of Medicine at the Boston University School of Medicine. Other participants included Kevin Ashby, MD, Clinical Instructor, UCLA School of Medicine, Saddleback Medical Group, Laguna Hills, California; Kenneth R. DeVault, MD, FACG, Associate Professor of Medicine, Division of Gastroenterology and Hepatology at the Mayo Clinic in Jacksonville, Florida; and Duane D. Webb, MD, FACG, Research Associate at the Center for Integrative Medicine, Duke University Medical Center, Durham, North Carolina. The supplement also contains a review on proton pump inhibitors (PPI) in the treatment of GERD written by Rosemary R. Berardi, PharmD, FASHP, Professor of Pharmacy at the University of Michigan College of Pharmacy, and Clinical Pharmacist of Gastroenterology, Department of Pharmacy, University of Michigan Health System. © Medical World

Gastroesophageal reflux disease is the most prevalent gastrointestinal disorder in the western world affecting approximately 10% of the US adult population on a daily basis.<sup>1</sup> The most prominent GERD symptom is heartburn, which can be especially problematic when it occurs during the night. Regurgitation of gastric contents is another prominent symptom.<sup>2</sup> GERD can also be manifested by atyp-

ical symptoms such as laryngitis, hoarseness, chronic cough, wheezing, and asthma. Some GERD patients experience noncardiac chest pains. In those individuals, cardiac disease must be excluded before an evaluation can be performed to identify the upper gastrointestinal source of the symptom. Recently, dental erosion caused by the regurgitation of gastric acid has been recognized as another atypical symptom of GERD.<sup>2-4</sup>

The prevalence of this disease has a tremendous impact on the cost of healthcare. A recent study of a 2.4 million-member health management organization concluded that acid-related disorders account for approximately \$59.4 million per year, and GERD accounts for 41% of this total. Peptic ulcer disease accounts for 36.8%.<sup>5</sup>

The simplest definition for GERD is the backward flow of gastric contents into the esophagus. Thus, GERD is primarily an esophagogastric motility disease. However, the erosive nature of the gastric acid present in the refluxed material is the ultimate cause of esophageal injuries, which can lead to esophagitis, peptic strictures, and Barrett's esophagus. A recent report has linked GERD to the development of esophageal adenocarcinoma.<sup>6</sup>

Because GERD is a complex disease with many treatment options, the American College of Gastroenterology (ACG) has formulated a set of guidelines to aid clinicians in their decision making.<sup>7</sup> These guidelines are periodically updated to reflect the most recent clinical developments. The latest version, published in 1999, states that acid suppression is the mainstay therapy for GERD.<sup>7</sup>

Currently, there are 3 classes of drugs that are used to increase gastric pH: antacids, histamine<sub>2</sub> receptor antagonists (H<sub>2</sub>RAs), and PPIs. Antacids act by neutralizing the pH of the stomach. However, because of their limited efficacy and short duration of action, they have not been shown to be effective in either the prevention or the healing of GERD-induced esophageal injury. Moreover, multiple doses per day are often required to control GERD symptoms. The H<sub>2</sub>RAs act by inhibiting a histamine-dependent biochemical pathway that stimulates gastric acid secretion. However, because there are several other stimulatory pathways that also contribute to acid secretion, there is a lack of consistency in the efficacy of H<sub>2</sub>RAs, and patients who receive H<sub>2</sub>RAs often experience tachyphylaxis to these drugs.

According to the ACG guidelines, PPIs are the most effective acid sup-

pression agents available.<sup>7</sup> Unlike H<sub>2</sub>RAs, PPIs block acid secretion at its source—the proton pump of the gastric parietal cell. Studies have consistently shown that PPIs are more effective than H<sub>2</sub>RAs in resolving GERD symptoms and in the prevention of esophageal injuries. PPIs have also been shown to be effective in the treatment of gastric and duodenal ulcers. Although H<sub>2</sub>RAs have lower acquisition costs than PPIs, they are not necessarily more cost effective. In fact, when efficacy is taken into consideration, high-dose H<sub>2</sub>RA therapy is more costly than PPI therapy, especially in cases of severe GERD.<sup>8</sup> Four PPIs are available in the United States: omeprazole, lansoprazole, rabeprazole, and the recently approved pantoprazole.

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ACRONYM LIST

The following acronyms appear in the pages of this Special Report supplement:

<b>ACG</b>	American College of Gastroenterology
<b>ARDs</b>	Acid-related diseases
<b>AUC</b>	Area under the concentration/time curve
<b>CYP</b>	Cytochrome
<b>ECL</b>	Enterochromaffin-like
<b>FDA</b>	Food and Drug Administration
<b>GERD</b>	Gastroesophageal reflux disease
<b>GI</b>	Gastrointestinal
<b>H<sub>2</sub>RAs</b>	Histamine <sub>2</sub> receptor antagonists
<b>HMO</b>	Health maintenance organization
<b>IV</b>	Intravenous
<b>LES</b>	Lower esophageal sphincter
<b>MCO</b>	Managed care organization
<b>OTC</b>	Over-the-counter
<b>PPIs</b>	Proton pump inhibitors
<b>PUD</b>	Peptic ulcer disease