

Gastroesophageal Reflux Disease – Update 2006

Karl-Hermann Fuchs, Ernst Eypasch

Introduction

Gastroesophageal reflux disease (GERD) is one of the most frequent benign functional disorders in humans concerning the gastrointestinal tract. It is a multifactorial process although the majority of patients develop this disease from a failure of the gastroesophageal junction to hold gastric contents in the stomach [20, 23, 36]. The disease presents typically with symptoms such as heartburn and/or regurgitation, but can present with dysphagia, extraesophageal symptoms such as epigastric pain, respiratory symptoms and others. Gastroenterologists and surgeons are the major medical subspecialties that are involved in the diagnosis, treatment and research of this disease. In addition, many other disciplines, such as pulmonologists, ENT physicians, radiologists, pathologists and others must be involved in the management of the disease because of its multifactorial background and its multifactorial problems.

The European Association for Endoscopic Surgery (EAES) has established consensus conferences regarding special medical problems involving minimally invasive surgery and endoscopy. Ten years ago a first consensus development conference was organized, focusing on GERD and the results were subsequently published in Surgical Endoscopy [28]. The purpose of this chapter is a critical overview of questions and consensus statements published at the time and a current analysis of important literature and randomized trials on GERD in 2006.

Consensus Subjects in Management of GERD

Epidemiologic Background in GERD

GERD is mainly established and develops predominantly in modern industrial societies such as Europe and the USA [23]. There is a high prevalence of the disease in these societies in 20–40% of the adult population. It was agreed that the natural history of the disease varies in a wide spectrum between a very mild form of the disease with occasional symptoms, and an
advanced stage of GERD with severe symptoms and endoscopic alterations. Many special topics were discussed and could not be resolved within the conference, such as the cause of increasing prevalence, special aspects of Barrett’s esophagus and its development to adenocarcinoma, the meaning of ultrashort Barrett’s esophagus and the relationship of GERD to *Helicobacter pylori* as well as GERD without the presence of esophagitis, abnormal sensitivity of the esophagus, and the acid and the so-called alkaline reflux.

Currently, the prevalence of GERD including all forms of manifestations can be determined as high as 10–20% in Western societies [5]. An increasing incidence of GERD is highly probable. Epidemiologic studies show a prevalence for at least one episode of heartburn per week in 11–18% of the population [5, 46, 55, 56].

**The Pathophysiologic Background of GERD**

GERD is a multifactorial process, in which esophageal and gastric changes are involved. The major pathophysiologic causes are the incompetence of the lower esophageal sphincter, transient sphincter relaxations, insufficient esophageal peristalsis, altered esophageal mucosal resistance, delayed gastric emptying and antrroduodenal motility disorders with pathologic duodeno-gastro-esophageal reflux [20, 23, 30, 36, 75, 81]. Several factors, such as stress, obesity, pregnancy and dietary factors as well as drugs, play an aggravating role in this process.

Currently no spectacular new insights into the pathophysiology of GERD have emerged. It is a multifactorial determined disease, in which without any doubt the gastroesophageal junction with its special anatomical and functional components are important. Since there is some evidence that different stages of severity of GERD might have a different background, this leaves us with more questions than evidence-based facts [48, 51, 74].

**The Useful Definition of the Disease**

A universally agreed scientific definition of GERD was not available at the time; therefore, a model of GERD as increased exposure of the mucosa to gastric contents causing symptoms and morphologic changes was used. This implied an abnormal exposure to acid and/or other gastric contents, like bile, duodenal and pancreatic juice in cases of combined duodeno-gastro-esophageal reflux.

In the past 5–10 years several attempts have been made by both gastroenterologists and surgeons to establish a definition that can be used by both subspecialties to fulfill requirements for research projects and the clinical management of the disease. Often these definitions are characterized by the