

CME

# The Montreal Definition and Classification of Gastroesophageal Reflux Disease: A Global Evidence-Based Consensus

Nimish Vakil, M.D., F.A.C.G.,<sup>1</sup> Sander V. van Zanten, M.D.,<sup>2</sup> Peter Kahrilas, M.D.,<sup>3</sup> John Dent, M.D.,<sup>4</sup> Roger Jones, M.D.,<sup>5</sup> and the Global Consensus Group

<sup>1</sup>University of Wisconsin School of Medicine and Public Health, Madison, Wisconsin and Marquette University College of Health Sciences, Milwaukee, Wisconsin; <sup>2</sup>Dalhousie University, Halifax, Nova Scotia, Canada;

<sup>3</sup>Northwestern University, Chicago, Illinois; <sup>4</sup>University of Adelaide, Adelaide, Australia; and <sup>5</sup>Kings College, London, United Kingdom

- OBJECTIVES:** A globally acceptable definition and classification of gastroesophageal reflux disease (GERD) is desirable for research and clinical practice. The aim of this initiative was to develop a consensus definition and classification that would be useful for patients, physicians, and regulatory agencies.
- METHODS:** A modified Delphi process was employed to reach consensus using repeated iterative voting. A series of statements was developed by a working group of five experts after a systematic review of the literature in three databases (Embase, Cochrane trials register, Medline). Over a period of 2 yr, the statements were developed, modified, and approved through four rounds of voting. The voting group consisted of 44 experts from 18 countries. The final vote was conducted on a 6-point scale and consensus was defined *a priori* as agreement by two-thirds of the participants.
- RESULTS:** The level of agreement strengthened throughout the process with two-thirds of the participants agreeing with 86%, 88%, 94%, and 100% of statements at each vote, respectively. At the final vote, 94% of the final 51 statements were approved by 90% of the Consensus Group, and 90% of statements were accepted with strong agreement or minor reservation. GERD was defined as a condition that develops when the reflux of stomach contents causes troublesome symptoms and/or complications. The disease was subclassified into esophageal and extraesophageal syndromes. Novel aspects of the new definition include a patient-centered approach that is independent of endoscopic findings, subclassification of the disease into discrete syndromes, and the recognition of laryngitis, cough, asthma, and dental erosions as possible GERD syndromes. It also proposes a new definition for suspected and proven Barrett's esophagus.
- CONCLUSIONS:** Evidence-based global consensus definitions are possible despite differences in terminology and language, prevalence, and manifestations of the disease in different countries. A global consensus definition for GERD may simplify disease management, allow collaborative research, and make studies more generalizable, assisting patients, physicians, and regulatory agencies.

(Am J Gastroenterol 2006;101:1900–1920)

## INTRODUCTION

A number of guidelines and recommendations for the diagnosis and management of gastroesophageal reflux disease (GERD) have been published in different countries, but a universally accepted definition of GERD and its various symptoms and complications is lacking (1–9). Reflux symptoms are common in primary care and GERD is frequently diagnosed based on symptoms alone, but there is no consensus on the distinction of GERD from dyspepsia, so that these terms may lead to confusion in primary care settings. This

has led some authorities to combine these entities in primary care management strategies (10). There is also uncertainty about the extraesophageal manifestations of GERD, coupled with an expanding list of putative extraesophageal disorders, resulting in both over- and underdiagnosis of the disease. Finally, the definition of Barrett's esophagus varies in different regions of the world, causing confusion in the assessment of risk and the appropriate use of surveillance.

The aim of this international Consensus Group was to develop a global definition and classification of GERD, using rigorous methodology, that could be used clinically by primary care physicians and that embraces the needs of

To access a continuing medical education exam for this article, please visit [www.acg.gi.org/journalcme](http://www.acg.gi.org/journalcme).