

# Comment From the Editors

## Functional GI Disorders: What's in a Name?

Within medicine and gastroenterology, the term *functional* has a variety of definitions as well as attributions that are potentially detrimental to patient care. In part, this relates to Western societal beliefs about illness (patient perception of ill health) and disease (observable biochemical or histopathologic abnormalities) and their associations with psychosocial factors.

Within societies, beliefs about illness and disease are no more than explanatory "folk" models that influence the nature of scientific inquiry and the conclusions drawn from the data. They represent the "truth" that reaffirms the existing model, examples being the *curandero* in Hispanic culture, shamanism in Native American cultures, and even biomedicine (ie, the high value placed on objective pathologic states to explain human illness) in modern Western medical culture. These models are not immutable but respond to broader pressures occurring within society. Interestingly, the biomedical model has existed for a relatively short time. Throughout most of Western recorded history, illness was understood as holistic: the ancient Greeks believed that mind and body were inseparable (Greek, *holos*), and medical disease must take into account the entire person rather than just the diseased part. This concept existed in Western medicine for thousands of years and reverberates with existing medical beliefs in Eastern and other non-Western societies.

However, less than 4 centuries ago, a paradigm shift (a break from the constraints of existing thought that then allows the individual to see the composite picture in another way) moved society away from holism toward biomedicine. In 1637, Rene Descartes proposed the separa-

tion of the thinking mind (*res cogitans*) from the body (*res extensa*). This dualistic concept took hold because it harmonized with sociopolitical influences relating to the separation of church (the spirit) and state (the body). Also, Cartesian dualism powerfully influenced scientific thinking and the practice of medicine. The dissection of human cadavers, previously prohibited, was now permitted (because the spirit was no longer believed to reside there). So what was seen (ie, organic disease) was real and amenable to scientific study, but illness without pathology was dismissed as behavioral (functional), spiritual, or even as possession by evil. By definition, these conditions could not be understood or studied, and the patients having these disorders were ignored or relegated to the asylums.

The change from holism to biomedicine continues to influence modern attitudes and behaviors about illness and disease. I believe it has also relegated to second class the value of the teaching, learning, and investigating nonpathologically based (ie, functional) disorders within medicine. It may also explain the negative attributions that are held toward patients with functional disorders: because there is no observable disease, the illness is less legitimate, psychiatric, and may even be questionable. However, the health status of patients with functional GI diagnoses (eg, pain severity, health care visits, quality of life, psychosocial distress, surgical frequency), is poorer than patients with organic disease.

Close to biomedical dualism is the concept of reductionism, ie, the relegation of diseases to single causes that are both necessary and sufficient to explain the illness (also called linear causality). This is represented by Koch's "germ theory" and has been important in understanding acute infectious disease. However, it

has its limitations with chronic disease, although they are not always seen. One notable investigator said, "Psychological issues are important, but finding the etiology (of IBS) will take care of the problem." This person addressed the importance of psychologic factors, but its conceptualization is both reductionistic and dualistic.

Beginning in the late 1970s, the limitations of reductionism and dualism became evident, and that may have set the stage for another paradigm shift in medical thinking. Several trends emerged. (1) A disconnect was found between illness and disease. Patients usually go to doctors with headache, fatigue, dizziness, or abdominal pain, and they are not easily explained by disease. Conversely, disorders traditionally thought to be "functional" (eg, IBS) are now associated with disease: increased mucosal inflammation and altered mucosal immunity. (2) Traditional diseases (eg, inflammatory bowel disease [IBD], ulcer disease), with comparable activity, can vary in the illness experience from asymptomatic to severely disabled. (3) Psychiatric disorders previously considered functional now have genetic determinants and biochemical correlates. (4) Even within infectious disease, the reductionistic germ theory does not hold for chronic infectious diseases (eg, tuberculosis, human immunodeficiency virus). Here, the infectious agents are conditionally expressed depending on environmental influences on host resistance or social-precipitating factors. In effect, science is now showing that organic disease has functional components and that functional disorders have organic components.

By 1977, the biopsychosocial model proposed a move away from biomedical reductionism and dualism to a multicausal model with integration of mind and body: illness is the product of biologic, psychologic,

and social subsystems interacting at multiple levels. This model reconciled the emerging research findings not explained by biomedicine, permitted the heterogeneity of medical illness and the various physiological components and clinical expressions of disease, and also opened the door to the concept of mind-body (eg, brain-gut) disorders.

Yet, it takes time for change, and the biomedical model is still alive and well. Approximately 20 years ago, we performed an epidemiologic survey on practice patterns and beliefs of 704 members of the AGA. The functional gastrointestinal disorders comprised 41% of GI practice, followed by IBD (28%), and these frequencies did not change during a 15-year follow-up period, although the frequencies of peptic ulcer decreased and liver disease increased because of the discovery of *Helicobacter pylori* and hepatitis C, respectively. The most frequent endorsement for the definition of functional was, "a disorder with no known structural (ie, no pathological or radiological) abnormalities, or infectious or metabolic causes (81%)" (Mitchell CM, Drossman DA. *Gastroenterology* 1987;92:1282-1284). Next, it was seen as a stress disorder,

more frequently by private practitioners (57%) than by academicians and trainees (34%). Last, it was believed to be a motility disorder by 43% of practitioners and 26% of academicians/trainees. Psychosocial factors were believed to affect the cause and pathogenesis of IBS but not IBD. Thus, the FGIDs, as the most common disorders seen in GI practice, are understood both dualistically and reductionistically as the absence of organic disease and with stress as an etiopathologic factor.

These beliefs and attitudes exist worldwide. I recently asked gastroenterologists from 18 different countries around the world who are involved with the FGIDs about the meaning of the term functional GI disorder to physicians and patients in their respective countries. With only 2 exceptions (eg, Japan and Hungary define it as gastrointestinal dysfunction), the meaning to physicians and patients is that of a psychological disorder or the absence of organic disease, and, in some cases, with pejorative features toward the patient.

Modern science is starting to move us away from biomedical reductionism and dualism toward a biopsychosocial model of illness and

disease. However, despite the evidence, the attitudes and behaviors of patients and physicians within our society are still by and large entrenched in the biomedical model. Although the functional GI disorders fit well within a newer and better understanding that brings legitimacy to them and to the patients who suffer from them, the FGIDs remain orphans in the still-prevailing biomedical model.

What is needed is global acceptance of what modern research is beginning to show: that the functional GI disorders are legitimate and amenable to standard scientific inquiry. This acceptance is not likely to occur until clinicians, investigators, patients, and regulatory and funding agencies are able to understand these disorders and the patients who have them from a more appropriate perspective. When this occurs, the FGIDs will have the same status and level of acceptance and support as organic disorders, and the current distinction between functional and organic GI disorders will not be necessary.

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