



Increasing Understanding of the Functional Gastrointestinal Disorders

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The functional gastrointestinal (GI) disorders are common conditions seen throughout the world. Studies show similar prevalence for these conditions across various populations. Why, then, is it so difficult for doctors and even some patients to conceptualize or accept a diagnosis of a functional GI disorder?

Functional GI disorders—like IBS, functional dyspepsia, or chronic functional abdominal pain—are among the most puzzling and prevalent of chronic disorders. Yet, until recently clinicians paid little attention to these disorders that could not be diagnosed in a traditional way; that is, as an inflammatory, infectious, or structural abnormality that could be seen by examination (e.g., endoscopy), x-ray, or laboratory test. Patients were often unsatisfied with their care and may have undergone unnecessary diagnostic procedures. The scientific community and its funding agencies gave little attention to the investigation of these disorders. Recently, this has been changing as new concepts are emerging. To understand where we are advancing, it is helpful to understand where we have been.

The Reductionist Approach

For the past 300 years, the Western biomedical system has contributed tremendously to advances in controlling infectious diseases and treating or repairing damaged tissue. The system is based on the scientific approach known as reductionism—reducing an illness to a single physical root, identifying the structural or biochemical cause such as an injury or an infection, and treating it—often with medication (like antibiotics) or surgery. Within this frame of reference, which is widely embraced by the public as well as by physicians, a disorder that has no identifiable structural cause is often viewed as not being a legitimate complaint. (A disorder is termed “organic” when a specific structural or biochemical cause can be identified and is termed “functional” when no specific biologic cause can be seen.)

How do we recognize illness—or wellness? When a person chronically suffers pain or other digestive symptoms that can upset their emotional well being, disrupt their social or professional life, or limit their personal potential—in the absence of any identifiable

structural or biochemical cause—we can hardly accept that this person is well. Yet, within the strict limits of the biomedical model, we can not reconcile the existence of a medical illness when there is no evident “organic” disease. As a consequence, as many who read *Participate* have experienced, when no structural abnormality is identified, symptom complaints may be trivialized, concerns diminished or dismissed, and doctors, and even some patients, may find it difficult to conceptualize or accept a diagnosis of a “functional” gastrointestinal disorder.

Changing Concepts

Hippocrates, the Greek physician who is called, “The father of (Western) medicine,” stated in the fourth century BC that, “Health depends on a state of equilibrium among the various factors that govern the operation of the body and the mind; the equilibrium in turn is reached only when man(kind) lives in harmony with his external environment.” For thousands of years Western societies took a holistic approach to wellness, until it was superseded in the seventeenth century by the reductionist model. The holistic approach conceptualizes health as an integration of the mind and the body where illness and disease can be seen to arise from the simultaneous interaction of systems—at the organ, cellular, tissue, interpersonal, and environmental level. In the 1970’s this approach began to be re-integrated into the Western health belief system; it is termed the biopsychosocial model.

Supporting this model are emerging new processes that legitimize the functional GI conditions within the scientific community. Attention is increasingly turning toward research and clinical care of individuals with these disorders. There is a shift away from the concept of a disease-based model based on a single underlying biological process to the more integrated, biopsychosocial model of illness. For the functional gastrointestinal disorders, this interaction is recognized between the gut, the brain, and the autonomic nervous system.

We are seeing advances in investigative techniques like improved motility assessment, imaging of the brain (PET, MRI), and molecular investigation of brain-gut peptides. (Peptides are “messenger” molecules that appear to convey intercellular communication throughout the

brain and body.) The results of tests using these techniques help support a newer conceptualization where symptoms and illness do not need to be understood in terms of structural pathology, but as a “disharmony” in the regulation of brain-gut functioning.

In the last two decades there has been a dramatic increase in the number of studies, symposia (IFFGD’s biennial International Symposium on Functional GI Disorders recently emerging as one of the most important), and presentations worldwide at meetings about the functional GI disorders. We have also seen increased interest by pharmaceutical companies to develop new classes of drugs to treat the disorders. These drugs act to help regulate or stabilize the pain experience or dysmotility that produce symptoms in the absence of structural abnormality.

Within this changing framework, support began to build for an international effort to characterize and classify the functional GI disorders. Beginning in the late 1980’s the situation within the clinical and scientific community began to change dramatically with the collaborative work of a group of investigators known as the “Rome working team.”

A New Framework for Diagnosing and Treating the Functional GI Disorders

How can a physician diagnose, categorize, study, or treat a disorder that exhibits no recognized physical or structural marker to confirm its presence? Two years prior to the International Congress of Gastroenterology held in Rome in 1988, Dr. Aldo Torsoli, then President of the Congress, proposed that working team committees be established to address medical issues not easily resolved by usual scientific inquiry or review. Continued support led to a series of functional gastrointestinal working teams between 1991 and 1994 that first developed guidelines for the diagnosis of irritable bowel syndrome.

Later their work resulted in the development of a system that for the first time classified all the functional gastrointestinal disorders and included symptom-based diagnostic guidelines. A group of the 34 working team members from 11 countries along with 50 international consultants published information and guidelines on the epidemiology (frequency of the functional GI disorders and influencing factors of age, race, and gender), physiology (biological factors contributing to symptoms), diagnostic evaluation and treatment, design of treatment trials, and the psychosocial aspects of the functional GI disorders. Collectively, these documents have been known as the “Rome Criteria.”

Publication of the Rome Criteria in 1994, which classified the functional GI disorders and offered standardized symptom based diagnostic guidelines, helped to legitimize the disorders and is associated with a notable rise in the number of research grants, pharmaceutical

studies, and publications in the field. These standards are increasingly being used in clinical practice to serve as a basis for diagnosis, avoid unneeded tests, and improve treatment and outcome. There remains no basis for a clinician to dismiss a patient’s complaint of functional GI symptoms solely because x-ray, blood test, or other physical finding can not validate it.

While functional GI symptoms do have underlying physiological (motor or sensory) mechanisms, valid or clinically acceptable physiologic findings that define these disorders currently are not easily measured. While this is changing, physiologic assessment as a diagnostic tool for functional GI disorders is not yet practical in a clinical setting. However, people with these disorders do bring quantifiable symptoms to their physician that can be categorized to simplify diagnosis and treatment.

A symptom-based system of diagnostic criteria is not a new concept. It is a method that has achieved worldwide acceptance in other fields. One notable example is the American Rheumatologic Association’s Primer for the diagnosis and treatment of arthritis. This use of symptom based criteria has simplified clinical care and led to the discovery of important new information on the disease process and treatment that previously did not exist.

As new clinical and physiologic data emerge, the Rome Criteria need to be modified. In March 2000, *Rome II: The Functional Gastrointestinal Disorders*, was published. This new work developed by over 50 participants refines, expands, and updates the original publication. The Rome Criteria help simplify diagnosis and treatment, and aid research by providing a method for consistent categorization of patients within the classifications of the disorders.

Increasingly, investigators are looking for structural or physiologic standards to diagnose the functional GI disorders. New diagnostic techniques are evolving that will help further these studies. With the increasing awareness, legitimization, and interest being shown toward the functional gastrointestinal disorders, promising new treatments are on the horizon.

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