

INTRODUCTION

The Functional Gastrointestinal Disorders and the Rome III Process

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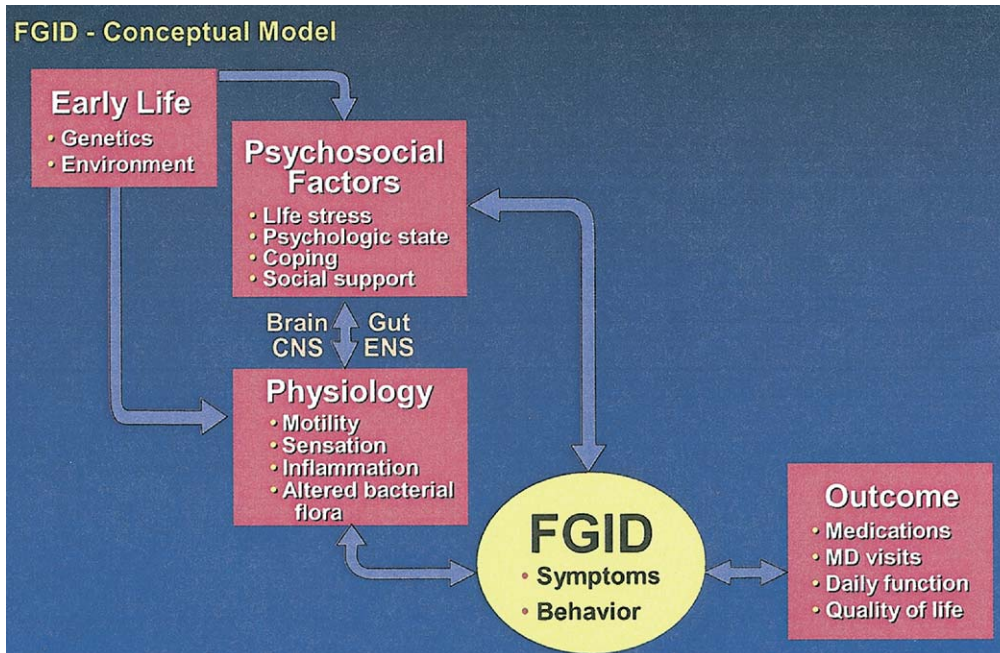
Throughout recorded history, and alongside structural diseases of the intestinal tract, are maladies that have produced multiple symptoms of pain, nausea, vomiting, bloating, diarrhea, constipation, or difficult passage of food or feces.¹ Although structural diseases can be identified by pathologists and at times cured by medical technology, the nonstructural symptoms that we describe as “functional” remain enigmatic and less amenable to explanation or effective treatment. Often considered “problems of living,” there are physiological, intrapsychic, and sociocultural factors that amplify perception of these symptoms so they are experienced as severe, troublesome, or threatening, with subsequent impact on daily life activities. Those suffering from such symptoms attribute them to an illness and self-treat or seek medical care. Traditionally trained physicians then search for a disease (inflammatory, infectious, neoplastic and other structural abnormalities) in order to make a diagnosis and offer treatment specific to the diagnosis. In most cases,² no structural etiology is found, the doctor concludes that the patient has a “functional” problem, and the patient is evaluated and treated accordingly.

This clinical approach results from a faulty conceptualization of functional gastrointestinal disorders (FGIDs) and in the inaccurate, demeaning and potentially harmful implications that some physicians, patients, and the general public attribute to them.³ Some clinicians feel ill at ease when making a diagnosis of an FGID because they are trained to seek pathology.⁴ In a random sample survey of 704 members of the American Gastroenterological Association,⁵ the most common endorsement of a functional gastrointestinal (GI) disorder was “. . . no known structural (ie, no pathological or radiological) abnormalities, or infectious, or metabolic causes” (81%). Next came “a stress-disorder” (57% practitioners and 34% academicians and trainees), and last was a “motility disorder” (43% practitioners and 26% academicians/trainees.⁶ A more recent survey of international investigators agreed that in their countries, physicians view the

FGIDs as psychological disorders or merely the absence of organic disease and often ascribe pejorative features to the patient.³ Some physicians deny the very existence of the functional GI disorders,⁷ whereas others exhibit dismissive or negative attitudes toward patients.^{4,8,9} Some physicians may pursue unneeded diagnostic studies to find something “real”,¹⁰ resulting in increased health care costs and possibly inappropriate care.¹¹ These types of beliefs and behaviors can “delegitimize” the FGIDs and the patients who experience them.

What is missing in these attitudes and behaviors is a proper understanding of the true genesis of FGID symptoms, an acknowledgment of their impact on patients, and a rational basis for diagnosing and treating them. In the last few decades, several important events have occurred that brought these common disorders into the forefront of clinical care, scientific investigation, and public awareness, and in the process, have made them scientifically exciting and clinically legitimate.

The first event began 3 decades ago with a paradigm shift that moved away from conceptualizing illness and disease based on a 3-century-old reductionistic model of disease in which the effort was to identify a single underlying biological etiology to a more integrated, biopsychosocial model of illness and disease.¹²⁻¹⁴ The former disease-based model had its roots with Descartes' separation of mind and body and at the time was a concept that harmonized prevailing societal views of separation of church and state.^{1,13} What resulted was permission to dissect the human body (which was previously forbidden), so disease was defined by what was seen (ie, pathology based on abnormal morphology). This approach led to centuries of valuable research producing effective treatments for many diseases. The concept of the mind (ie, the central nervous system [CNS]) as being amenable to scientific study or as playing a role in illness and disease was marginalized, however. The mind was considered the seat of the soul, not to be tampered with. This idea seems to have had a profound effect on Western



These researchers lost their grants when it was discovered that H pylori, not emotional stress, caused stomach ulcers, and all the patients got cured. They are trying to get back the funding they lost by influencing medical thought, but after almost a 30 years of this research, they still can't cure diarrhea or stomach ulcers.

Figure 1. This biopsychosocial conceptualization of the pathogenesis and clinical expression of the functional GI disorders shows the relationships between psychosocial and physiological factors, functional GI symptoms, and clinical outcome.

society where mental illness or even the effects of stress on physiological function became less available for study and even stigmatized. More recent scientific studies link the mind and body as part of a system where their dysregulation can produce illness (the person's experience of ill health) and disease. By embracing this integrated understanding, the biopsychosocial model allows for symptoms to be both physiologically multidetermined and modifiable by sociocultural and psychosocial influences.

Figure 1 illustrates the relationships between psychosocial and physiological factors and functional GI symptoms and clinical outcome. Early in life, genetics, in addition to environmental factors such as family influences on illness expression, abuse, major losses, or exposure to infections, may affect one's psychosocial development in terms of one's susceptibility to life stress or psychological state and coping skills, as well as susceptibility to gut dysfunction—abnormal motility, altered mucosal immunity, or visceral hypersensitivity. Furthermore, these “brain-gut” variables reciprocally influence their expression. Therefore, an FGID is the clinical product of this interaction of psychosocial factors and altered gut physiology via the brain-gut axis.¹⁵ For example, an individual with a bacterial gastroenteritis or other bowel disorder who has no concurrent psychosocial difficulties and good coping skills may not develop the clinical syndrome (or be aware of it) or if it does develop, may not perceive the need to seek medical care. Another individual with coexistent psychosocial comorbidities, high life stress, abuse history, or maladaptive coping, may develop

a syndrome (eg, postinfectious irritable bowel syndrome [IBS] or dyspepsia), go to the physician frequently, and have a generally poorer outcome.^{16–20} Furthermore, the clinical outcome will, in turn, affect the severity of the disorder (note double-sided arrow in Figure 1). Thus, a family that addresses the illness behavior adaptively and attends to the individual and his or her psychosocial concerns may reduce the impact of the illness experience and resultant behaviors. Conversely, a family that is overly solicitous to the person's illness²¹ or a societal group that interprets certain symptoms with threat may amplify the symptoms and illness behaviors.²² In the health care field, when the physician acknowledges the reality of the patient's complaints, provides empathy, and engages in an effective physician-patient interaction, symptom severity and health care seeking are reduced.²³ Conversely, another physician who repeatedly performs unneeded diagnostic studies to rule out pathological disease, dismisses the patients concerns, or does not effectively collaborate in the patient's care is likely to promote a vicious cycle of symptom anxiety and health care seeking.^{11,24}

The second change over the last 2 decades has been the remarkable growth in investigative methods that allow us to quantify these associations for the FGIDs. Within the gut, motility assessment has advanced,^{25–27} the barostat is the standard for testing visceral hypersensitivity,²⁸ and the investigation of peptides, mucosal immunology, inflammation, and alterations in the bacterial flora of the gut provide the translational basis for GI symptom generation. With regard to the brain, imaging

This is not a new idea - the concept that infectious diseases are God's judgement for wrong doing is thousands of years old.