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Drossman Gastroenterology 55 Vilcom Center Drive
Boyd Hall, Suite 110
Chapel Hill, NC 27514

Functional GI Disorders: What's in a name?

Douglas A. Drossman, MD

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In December 2004, when the 28 chairs and co-chairs of the Rome III committees convened, part of the agenda pertained to whether the designation "Functional GI Disorders (FGID)" should be abandoned. Although many recognized the negative connotations attributed to the term, there was no consensus on an alternate designation. Eventually, a referendum of all 90 committee members led to a decision to retain the term "functional".

Does it really matter what we name these disorders? Perhaps the important question is what makes the term "functional" so different from "organic" and, based on newer scientific developments in the field, why do we even retain these distinctions? To answer these questions, it is important to look historically at how societal beliefs relate to illness and disease and, in particular, how psychosocial factors contribute to these beliefs. Societal beliefs or explanatory models about human illness change, depending on the existing "folk" models of the time. They can influence the nature of scientific inquiry and the conclusions drawn from the data. Examples include the Curandero in Hispanic culture, shamanism in Native American cultures, and even biomedicine (i.e., the high value placed on objective pathological states to explain human illness) in modern western medical culture. This last example of biomedicine is interesting because, for an extended period of time -- in fact throughout most of Western recorded history -- illness was understood from a "holistic" (Greek - "Holos") perspective. As proposed in rudimentary form by the ancient Greeks, holism reflected the notion that mind and body are inseparable; medical disease must take into account the whole person rather than just the diseased part. This concept still reverberates within existing medical beliefs in Eastern and other non-Western societies, and it existed in Western medicine for thousands of years.

Beginning about 350 years ago, certain changes set the stage for a "paradigm shift" away from holism toward the acceptance of biomedicine as the disease model. In 1637 in Europe, Rene Descartes proposed the separation of the thinking mind (res cogitans) from the body (res extensa). Perhaps this dualistic concept took hold because it harmonized with existing sociopolitical influences relating to the separation of Church (the spirit) and State (the body), making holistic concepts less acceptable. When applied to the medical field, this Cartesian dualism changed scientific thinking and practice. It now permitted the previously restricted ability to dissect human cadavers (since the spirit was no longer believed to reside there), thus creating a pathologically based model for disease, i.e., what was seen (later considered "organic") represented true disease.

However, this biomedical, pathologically based model also dismissed patients with psychiatric ("functional") problems as having behavioral disorders (or at the time, possession by evil) that could not

be seen or understood. Such patients were relegated to the asylums, and not considered amenable to scientific investigation. This fundamental change in the concept of illness and disease beginning over 3 centuries ago has continued to influence modern attitudes and behaviors, in particular by placing secondary value on the understanding, teaching and investigation of non-pathologically based (i.e., functional) disorders in all areas of medicine. It has also contributed to the negative attributions held toward patients having functional disorders; with no observable disease, their illness is considered less legitimate, psychiatric, or even questionable.

Closely related to biomedical dualism is the concept of reductionism, i.e., the relegation of diseases to single etiologies 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. But, it has its limitations with regard to chronic disease that is multidetermined. The retention of this concept was recently demonstrated by one notable investigator who said: "Psychological issues are important, but finding the etiology (of IBS) will take care of the problem." This person's attention to the importance of psychological factors is reasonable, although the conceptual understanding is both reductionistic and dualistic.

Despite efforts by many scientists over the last 3 centuries to reintroduce a more integrated understanding of mind and body, biomedical concepts have for the most part held ground in Western society. However, beginning in the late 1970's, research began to show the limitations of biomedical reductionism and dualism, thus setting the stage for another paradigm shift in medical thinking. Several trends emerged: (a) A disconnect was found between illness and disease; many patients went to doctors with illnesses such as headache, fatigue, dizziness or abdominal pain, that was not easily explained by disease. (b) Patients with identifiable disease, such as IBD or ulcers, could vary in their illness expression from asymptomatic to severely disabled, despite comparable objective findings. (c). Research was also showing that psychiatric disorders considered "functional" had genetic determinants and biochemical correlates. (d) Even in the area of infectious disease, the reductionistic germ theory of illness came into question; chronic infectious diseases, like tuberculosis or HIV, were now seen as conditional etiological agents that required environmental influences on host resistance or social precipitating factors to bring the condition to full clinical expression. Thus, it was becoming more and more difficult to accept the concept of reductionistic causality when biological and social heterogeneity existed in the clinical expression of chronic disorders. In effect, science is now showing that organic disease has "functional" components and functional disorders have organic components, a recent example being the finding of mucosal inflammation and immune dysfunction in a subgroup with IBS.

By 1977, the time may have been ripe for a new "Biopsychosocial Model" to take hold -- another paradigm shift from biomedical reductionism and dualism to one of multi-causality with the integration of mind and body. A series of papers by George Engel offered a modern exposition of holistic theory, proposing that illness is the product of biological, psychological and social subsystems interacting at multiple levels. Instead of considering any one factor as etiologic, Engel proposed that it is the interaction of these subsystems that determines the illness and disease.

This model provided not only the framework for reconciling emerging research findings that were not amenable to a strictly biomedical approach, but it also explained the heterogeneity of medical illness and the uniqueness of its clinical expression.

Yet, it takes a long time for conceptual schema to change and the biomedical model is still alive and well. About 20 years ago, we surveyed a random sample of 704 members of the AGA in order to obtain the frequencies of various GI disorders in practice and the attitudes and beliefs of gastroenterologists towards the functional GI disorders (FGIDs). We found that the FGIDs comprised 41% of GI practice and next came IBD (28%). Interestingly, this finding did not change in a follow-up survey 15 years later, although the prevalence of peptic ulcer disease had decreased and liver disease had increased due to the discovery of h. pylori and hepatitis C, respectively. We also found that the most frequent endorsement for the definition of functional was"a disorder with no known structural (i.e., no pathological or radiological) abnormalities, or infectious or metabolic causes" (81%). Next came the definition of a "stress-disorder" which was more frequently endorsed by private practitioners (57%) than academicians and trainees (34%), and last was the definition of "motility disorder" by 43% practitioners and 26% academicians/trainees.

Psychosocial factors were believed to affect the etiology and pathogenesis of IBS but not of IBD. These findings tell us that the FGIDs are the most common disorders seen in GI practice. They are still understood from the Cartesian concept as the absence of organic disease and with stress as an etio-pathological factor. Furthermore, the inability to conceptualize these conditions as "real" leads to a derogation of the patient.

These types of findings exist worldwide. Table 1 summarizes the results of a convenience survey, where I asked gastroenterologists 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. While this is hardly a scientific study, I found that with only a few exceptions (e.g., 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 with pejorative features toward the patient.

In a recent study by our group of GI fellow and patient attitudes that was focused on night and weekend phone calls to the on-call fellow, we found considerable disparity between physician and patient views about functional GI disorders. The patients who called in felt their requests were reasonable due to disabling symptoms, they liked the doctor on call, and believed the recommendations they received were helpful. By contrast, the on-call fellows did not feel the patients were terribly disabled or that the requests were reasonable, they did not think their own medical recommendations were helpful, and they did not like the patients as much as the patients liked them. When the physician responses were analyzed with regard to whether the patients had a functional or organic diagnosis, we found that those with FGIDs were associated with the more negative attitudes, significantly more than those with organic disease. This disparity is in striking contrast with data showing that the health status of patients with FGIDs -- in terms of pain severity, health care visits, quality of life, psychosocial distress, and even frequency of operations -- is more severe than patients with organic disease.

Modern science is moving us away from biomedical reductionism and dualism towards a more appropriate 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. While the functional GI disorders fit well within a newer and better understanding that brings legitimacy to the disorders and to the patients who suffer from them, the FGIDs remain "orphans" in the still-prevailing biomedical model.

So, the question about the need for a name change and the inability to find a good substitute remains. What is needed is not so much a name change as much as global acceptance of what has been proven through objective research -- that the functional GI disorders are legitimate and amenable to standard scientific enquiry. This acceptance is not likely to occur until clinicians, investigators, patients, regulatory agencies, and funding organizations 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.

Table 1. Meaning of "Functional" GI Disorders by GI Physicians throughout the world

Country	Term	Translation term	Meaning to MD	Meaning to patient
USA	Functional GI Disorder	"Not organic"	"Psychiatric"	"In my head"
Romania	Tulburari functionale digestive (much less used: Tulburari functionale gastrointestinale)	Digestive functional disorders	Motility disorders or idiopathic disorders	"psychiatric or psychological" ; patients need an explanation of this term.
Brazil	Distúrbio Funcional do Aparelho Digestivo or Distúrbio Digestivo Funcional	FGID	"Psychologic" "Somatizer" "Hypochodriacs" "waste of time" "crazy"	"Psychological" " Everything comes from my head" "I don't know what I have: no one finds the reason of my problems"
Spain	Trastorno funcional digestivo	Functional GI disorder	"Not organic" "Nothing important" "Psychologic" "Waste of time"	NOTHING "Psychologic" "They do not believe me" "They do not find what I have"
France	Troubles fonctionnels digestifs	Functional GI Disorder	- Psychosomatic - A disorder related to stress, anxiety etc... without any organic basis. Sometimes negative perception of patients as difficult and cumbersome	"They say it's in my head because they couldn't find the cause" "They just say this to get rid of me"
Netherlands	Functionele maag-darmstoornis	Functional GI Disorder	Not organic, caused by disordered function	Caused by disordered function
Japan	Kinousei Shoukakan Shougai (機能性消化管障害)	Functional GI Disorder	"Gastrointestinal Dysfunction"	"Something wrong in my gut."
Germany	Funktionelle GI Erkrankung	Same wording as in the US	Abdominal symptoms of unknown origin, but with high probability that psychological factors are involved in the genesis of symptoms but a possibility that altered GI function plays a role	Depends very much on the level of personal information and the way the physician presents this diagnosis to the patient. In general patients don't use this term very often. The majority of patients might associate an involvement of stress or stressors.
Hungary	A tápcsatorna funkcionális rendellenessége vagy betegsége	The disorder of a function without organic basis	In Hungarian it means functional without psychiatric pattern	Functional in other words disorder without organic basis
Hungary	Scientific: Funkcionális gasztroenterológiai kórképek; more popular: Emésztőszervi muködési zavarok	Functional Gastroenterological disoders; Popular: digestive functional troubles	Motility disorders	Motility disorders
Italy	Disturbo funzionale gastrointestinale		The term is not used on a regular basis; "not organic usually indicating ibs or non organic dyspepsia"; psychosomatic.	Not understood. It should be explained otherwise, the meaning is "psychosomatic", "in my head"
Slovenia	Funkcionalne bolezni prebavil	Functional GI disorders	Non-organic	"psychological"
Croatia	Funkcionalna oboljenja probavnog trakta	Functional gastrointestinal tract disorders	Functional not-organic disorders	Psychological or even psychiatric
Ukraine	Travni funktzionalni zvorushenni	Functional digestive disorders	Mainly psychological	Mainly psychological or psychiatric
China	"gong/neng/xing(= functional) wei/chang/dao (gastrointestinal) jibhuan (=disorder)". Or respelt: Kong Neng Hsing Wei Ch'ang Tao Chi Huan	Functional gastrointestinal disorder	Non-organic, psychiatric	Psychological, stress-related
Greece	Λειτουργική διαταραχή πεπτικού (συστήματος)	Digestive (system) functional disorder	For most MDs: "No cause identified following routine investigations, including blood tests and endoscopy/radiology"	"Psychological" "In my head" Most patients ask for an explanation; it requires at least 50-100 words to explain the term to a patient
Russian	Funcionalnoe narushenie pishevovo trakta	Functional GI Disorders	Many MD's in Russia and Bulgaria look down on the diagnosis (thinking that it is not grounded or serious)	Patients are frequently told that there is nothing wrong with them so they often change physicians in attempt to find someone who can tell them what is wrong. They frequently come to the physicians thinking that they have colitis (from reading popular journals ?)
Bulgarian	Fincionalno narushenie na stomashno-chrevnijat trakt	Functional GI Disorders		
Czech	Funkchny strevny poruhy (Funkční střevní poruchy)	Functional GI Disorders		
Israel	תוריקנפת תשרפה לוכיעה תכרעה לש Hafraot tifkudot shel ma'arechet ha'itkul	Functional disturbances of the digestive system	Not organic, psychological	Has no real meaning until explained that it is a problem that is related to function rather than structure