Comorbidity of Posttraumatic Stress Disorder and Irritable Bowel Syndrome

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Background: Irritable bowel syndrome (IBS) is a chronic disorder that has been found to be associated with psychiatric disorders and a history of physical and/or sexual abuse. To date, the relationship of posttraumatic stress disorder (PTSD) and IBS has not been investigated. The primary purpose of this study was to examine the relationship of IBS and PTSD.

Method: Fifty consecutive IBS patients admitted to a clinical treatment study were assessed for IBS, trauma history, and psychiatric disorders.

Results: Twenty-seven IBS patients (54%) met criteria for a psychiatric diagnosis at some time in their lives. Twenty-two patients (44%) reported a trauma history. Eighteen (36%) were diagnosed with PTSD. Those IBS patients with a trauma history were more likely to have other comorbid psychiatric diagnoses.

Conclusion: These results suggest that IBS is often associated with psychiatric disorders, indicating that assessment and treatment of these comorbid conditions may be important in the treatment of IBS. PTSD, which had not been previously investigated in relation to IBS, had a high prevalence, indicating the need for careful trauma and PTSD assessment in patients with IBS. Patients with IBS who have a trauma history may be more at risk for other comorbid psychiatric disorders than IBS patients without a trauma history.

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Irritable bowel syndrome (IBS) is a chronic disorder that affects approximately 8% to 17% of the general population[1–3] and costs an estimated $1 billion in the United States alone.[4] Several studies have investigated the relationship between psychiatric disorders and IBS and reported a high prevalence of anxiety and mood disorders.[5–7] Furthermore, recent research has indicated that patients seeking treatment for IBS often have a history of physical and/or sexual abuse. Drossman and colleagues[8] found that patients with functional gastrointestinal disorders, particularly IBS, had a significantly higher rate of childhood physical and sexual abuse compared to patients with organic illness. Walker and colleagues[9] have also reported high rates of childhood sexual abuse (55%) in patients with IBS compared to a comparison group with inflammatory bowel disease (5%).

With regard to psychiatric disorders, victimization is most often associated with PTSD. Thus, high rates of PTSD in IBS patients seem likely. To date, however, the prevalence of PTSD in an IBS population has not been assessed. In the current study, we sought to examine the prevalence of trauma and PTSD in IBS patients. Panic disorder, social phobia, simple phobia, generalized anxiety disorder, major depression, and substance abuse were also assessed.

METHODS

Fifty consecutive outpatients were recruited through the media from the general population to participate in a medication treatment study. After a complete description of the study was given to the subjects, written informed consent was obtained. The diagnosis of IBS was made (C.I.) using operational diagnostic criteria for IBS (see Table 1).[10]

Physical examination and laboratory tests including fecal occult blood, urinalysis, complete blood count, and blood chemistry analysis were performed. Organic bowel disease was excluded by proctosigmoidoscopy (C.D.B., W.B.). Lifetime prevalence and current diagnoses of psychiatric disorder were assessed via the Structured Clinical Interview for DSM-III-R,[11] supplemented by additional inquiries concerning traumatic life events. The age at onset of IBS and/or psychiatric disorders was recorded.

RESULTS

The sample consisted of 50 patients, 40 women and 10 men, with an age range from 19–68 years for women

Table 1. Irritable Bowel Syndrome (IBS) Symptom Criteria*

Continuous or recurrent symptoms over at least 3 months of
1. Abdominal pain relieved with defecation or associated with a change in frequency or consistency of stool; and/or
2. Disturbed defecation (three or more at least 25% of the time)
   a. altered stool frequency
   b. altered stool form (hard or loose/watery)
   c. altered stool passage (straining or urgency)
   d. passage of mucous
   e. bloating or feeling of abdominal distension

*From Drossman et al., 1990.[10]

Table 2. Lifetime Prevalence of Psychiatric Diagnoses (N = 50)*

Diagnosis	Lifetime Prevalence N	%
Posttraumatic stress disorder (PTSD)	18	36
Panic disorder with agoraphobia	7	14
Panic disorder without agoraphobia	2	4
Social phobia	5	10
Simple phobia	2	4
Generalized anxiety disorder (GAD)	2	4
Major depression	16	32
Substance abuse	2	4

*30% of sample had more than one psychiatric diagnosis.

(mean = 43.6 years) and 18–70 years for men (mean = 46.3 years). Forty-six patients were Caucasian and 4 were African-American. All patients had moderate-to-severe IBS and had experienced symptoms of IBS for a significant period of time (range, 5–65 years; mean = 38.1). Twenty-seven of the patients (54%) met DSM-III-R criteria for a lifetime psychiatric disorder (see Table 2).

Of the 27 patients with a psychiatric diagnosis, lifetime disorders noted were PTSD (N = 18), other anxiety disorders (N = 18), major depression (N = 16), and substance abuse (N = 2). Current DSM-III-R diagnostic criteria were met by 14 (28%) of the sample (PTSD, N = 3; major depression, N = 4; other anxiety disorders, N = 7). Fifteen patients had more than one psychiatric disorder. Of the 18 patients with lifetime prevalence of PTSD, 12 (67%) had multiple psychiatric diagnoses (other anxiety disorders, N = 9; major depression, N = 9; substance abuse, N = 2).

A wide range of catastrophic events were elicited in the patients with a lifetime diagnosis of PTSD (Table 3). Fourteen (78%) had been exposed to more than one traumatic event. The most commonly reported trauma was physical abuse by a nonfamily member (50%), followed by sexual abuse by a family member (39%). Four patients had a trauma history but did not meet diagnostic criteria for PTSD lifetime or current. One had been in a car accident, one reported separate incidents of physical and sexual abuse, one patient reported a sexual assault by a family member, and one patient reported two separate physical assaults and a rape. (We did not conduct statistical analyses on these data because of the small number of patients who reported a trauma history but did not have PTSD [N = 4].)

Table 3. Traumatic Event History of PTSD and Non-PTSD Patients

Event	PTSD (N = 18)[a] N	%	Non-PTSD (N = 4)[b] N	%
Sexual abuse by family member	7	39	1	25
Sexual abuse by nonfamily	4	22	2	50
Domestic violence	4	22		
Physical abuse by nonfamily	9	50	3	75
Motor vehicle accidents	4	22	1	25
Other accidents	3	17	0	
Disasters	3	17	0	
Death of relative–suicide	3	17	0	
Death of relative–murder	1	6	0	
Death of relative–AIDS	1	6	0	
Child abandonment	1	6	0	

[a]77% of comorbid IBS/PTSD patients reported more than one traumatic event.
[b]50% of non-PTSD patients (with a trauma history) reported more than one traumatic event.

Table 4. Comorbid Diagnoses by Trauma History and PTSD Status

Disorder	Trauma History & Comorbid PTSD (N = 18) N	%	Trauma History & No PTSD (N = 4) N	%	No Trauma & No PTSD (N = 28) N	%
Panic disorder	4	22	0	0	5	18
Social phobia	4	22	0	0	0	0
Simple phobia	1	6	0	0	1	4
GAD	0	0	1	25	0	0
Substance abuse	2	11	1	25	0	0
Major depression	8	44	1	25	4	14
No other disorder	5	28	1	25	21	75

The chronology of PTSD and IBS was also examined. The mean age at onset of PTSD was calculated from the time of the first traumatic event (range, 3–50 years; mean = 16). The age at onset of IBS in the PTSD patients ranged from 5 to 50 years (mean age = 25.3). The age at onset of IBS in PTSD patients occurred approximately 9 years after the mean age at onset of PTSD.

Finally, we examined comorbidity of other psychiatric disorders among IBS patients with a trauma history and comorbid PTSD (N = 18), IBS patients with a trauma history and no PTSD (N = 4), and IBS patients with no trauma history and no diagnosis of PTSD (N = 28) (Table 4). (Again, we did not conduct statistical analyses of these differences because of the small number of IBS patients who had a trauma history/no PTSD.)

In the comorbid IBS/PTSD group, the most common other comorbid psychiatric diagnosis was major depres-

sion (44%). Only 28% of this group did not have another comorbid diagnosis. In the trauma/no PTSD group, comorbid diagnoses were spread evenly across generalized anxiety disorder (25%), substance abuse (25%), major depression (25%), and no diagnosis (25%). In the no trauma/no PTSD group, the most common comorbid diagnosis was panic disorder (18%), followed by major depression (14%). A full 75% had no other comorbid psychiatric diagnosis.

DISCUSSION

The results of this study indicate that comorbid psychiatric disorders are common in IBS patients. In particular, PTSD, which is often associated with sexual and physical abuse, was prevalent in this population. Whereas past studies have assessed victimization history in IBS patients, this is the first investigation of PTSD in IBS patients. The high rates of PTSD found in this study suggest that, like other comorbid anxiety disorders, PTSD may be associated with symptoms of IBS. Furthermore, results from this study suggest that having a trauma history with or without PTSD may put patients with IBS at risk for suffering from other comorbid psychiatric disorders. Approximately 75% of IBS patients who had a trauma history also suffered from a comorbid psychiatric disorder compared with only 25% of IBS patients who did not have a trauma history. Because of the small number of patients who had a trauma history, but no PTSD, a further investigation of any possible differences between this group and the PTSD group in terms of other comorbid psychiatric diagnoses is needed.

It is not clear why the age at onset of IBS symptoms is a mean of 9 years after the onset of PTSD. Perhaps PTSD, which is associated with a dysregulation in other neurobiological systems, including the hypothalamic-pituitary-adrenocortical axis, the central and peripheral adrenergic nervous systems, and the endogenous opioid system,[12] may also lead to a dysregulation in the enteric nervous system over time. Lydiard et al.[6] and Walker et al.[7] have suggested an interplay between the gut, the enteric nervous system, and the central nervous system may be important in understanding the overlap of IBS and psychiatric disorders. This connection with regard to PTSD and IBS needs further investigation.

This study used a patient sample that limits the generalizability of these results. Investigations of nontreatment-seeking IBS patients also need to be conducted to determine if comparable rates of victimization and PTSD are present. It is possible that PTSD may be a variable that mediates health care–seeking behavior, as other studies have found that victimization is associated with high levels of medical utilization. Future studies should also compare individuals with IBS and PTSD to those with IBS who have a victimization history, but do not have PTSD, to determine any potential differences. For instance, if someone has a victimization history but did not develop PTSD, is he/she also less likely to seek health care for IBS symptoms than those individuals who have PTSD and therefore may be very anxious?

Other limitations of this study include the small sample size and the lack of a standardized trauma assessment measure. Clearly, future studies should include a larger number of subjects, as well as a trauma assessment measure that behaviorally defines a broad range of traumas.

Despite these limitations, however, this study draws our attention to the need for physicians to develop an awareness of the relationship between victimization, IBS, and PTSD and to begin to assess IBS patients for victimization history and psychiatric disorders, since they are very common in this population. Such steps could result in more effective use of physicians' time, a reduction in unnecessary investigation, and prescription of appropriate psychopharmacologic and/or psychological treatments leading to an outcome of improved patient care and a reduction in expenditure of health care dollars.

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