

Nongastrointestinal symptoms of irritable bowel syndrome: An office-based clinical survey

NB Hershfield MD FRCPC FACP

NB Hershfield. Nongastrointestinal symptoms of irritable bowel syndrome: An office-based clinical survey. *Can J Gastroenterol* 2005;19(4):231-234.

Irritable bowel syndrome (IBS) is the most prevalent gastrointestinal problem faced by practicing gastroenterologists. For many years, nongastrointestinal symptoms have been documented in IBS patients, but the medical literature does not emphasize them. The present study explored how IBS and inflammatory bowel disease patients differ in their reporting of nongastrointestinal symptoms. Information from 200 consecutive patients with IBS and a similar number of patients with Crohn's disease (in a single gastroenterology practice) was obtained at the initial visit using a simple questionnaire. Comparison of the data revealed that IBS patients describe certain nongastrointestinal symptoms far more frequently than do those with inflammatory bowel disease. It is recommended that these symptoms be considered along with the generally accepted criteria for making a positive diagnosis of IBS.

Key Words: *Irritable bowel syndrome; Nongastrointestinal symptoms*

Les symptômes non gastro-intestinaux du syndrome du côlon irritable : Une enquête clinique en cabinet

Le syndrome du côlon irritable (SCI) est le trouble gastro-intestinal le plus prévalent qu'observent les gastroentérologues en exercice. Depuis de nombreuses années, des symptômes non gastro-intestinaux sont documentés chez les personnes atteintes du SCI, mais la documentation médicale ne les met pas en relief. La présente étude examine en quoi les personnes atteintes du SCI et d'une maladie inflammatoire de l'intestin diffèrent lorsqu'elles décrivent leurs symptômes non gastro-intestinaux. De l'information obtenue auprès de 200 patients consécutifs atteints du SCI et d'un nombre de patients similaire souffrant de la maladie de Crohn (dans un seul cabinet de gastroentérologie) a été obtenue à la première visite, au moyen d'un questionnaire simple. La comparaison des données a révélé que les patients atteints du SCI décrivent certains symptômes gastro-intestinaux beaucoup plus souvent que ceux qui souffrent d'une maladie inflammatoire de l'intestin. Il est recommandé de tenir compte de ces symptômes en plus des critères généralement acceptés pour poser un diagnostic positif de SCI.

RESULTS

Most of the participants in either group were female: 129 of 200 patients in the IBS group and 133 of 200 in the inflammatory bowel disease (IBD) group.

The presence of nongastrointestinal symptoms in IBS and IBD groups are listed in Table 2 and illustrated in Figure 1. IBS patients were more likely to complain of headache, urinary dysfunction, chronic fatigue syndrome (CFS), fibromyalgia or mood disturbance. CFS was severe enough in 20 patients to result in major impairment of their quality of life; however, symptoms that could be readily ascribed to organic disease (eg, weight loss and night sweats) were more frequently reported by patients with Crohn's disease.

Subjects in both groups frequently reported sleep disturbance, but IBD patients, unlike those with IBS, usually stated that it was due to gastrointestinal symptoms, especially diarrhea and abdominal pain. Slightly more patients with IBS than IBD described menstrual difficulties, but the difference did not appear to be significant.

Fibromyalgia and CFS were generally diagnosed before the gastrointestinal consultation, and usually had been seen by other consultants. Anxiety and depression were severe enough to warrant specific psychotropic therapy. The significance of other symptoms, such as headache and sleep disturbance, was

Irritable bowel syndrome (IBS) is the most prevalent problem faced by gastroenterologists in clinical practice (1). The Rome criteria, which were developed in 1989 (2) and revised in 1999 (3), are helpful at arriving at a diagnosis; however, they do not address nongastrointestinal symptoms despite the fact that practitioners and many investigators recognize their presence in IBS patients (4-8). The present study compares the frequency with which such symptoms are reported by IBS patients with the frequency of symptoms reported by those with an organic gastrointestinal disorder, specifically, Crohn's disease.

PATIENTS AND METHODS

Two hundred consecutive patients with IBS (based on the Rome criteria) and 200 patients with documented Crohn's disease were included in the present study. All patients were from the author's outpatient practice and no hospitalized patients were included. Only residents of Alberta younger than 50 years of age were included in the study.

All patients were asked about a wide variety of symptoms, using a simple questionnaire developed by the author, on the first visit to the office. The presence of nongastrointestinal symptoms was noted and further enquiry was undertaken when appropriate. The symptoms considered in the present report are listed in Table 1.

Division of Gastroenterology, Department of Medicine, University of Calgary, Calgary, Alberta

Correspondence: Dr NB Hershfield, Division of Gastroenterology, Department of Medicine, University of Calgary, Calgary, Alberta T2N 2T9.

Telephone 403-240-4084, fax 403-244-3536, e-mail gutdoc1@shaw.ca

Received for publication November 7, 2003. Accepted January 3, 2005

TABLE 1
Nongastrointestinal symptoms and syndromes

Symptom or syndrome	Notes
Headache	Requiring standard analgesic therapy more than 3 times/week
Sleep disturbance	Either difficulty falling asleep or early awakening at least 5 nights/week
Disturbance in menstrual function	Excessive bleeding, irregular or painful periods, or other menstrual symptoms
Disturbance in urinary function	Urinary urgency, frequency or pain, or difficulty passing urine
Fibromyalgia	Presenting as musculoskeletal pain and satisfying accepted criteria
Chronic fatigue syndrome	As diagnosed by other consultants, using accepted criteria
Mood disturbance	Depression and/or anxiety severe enough to warrant treatment
Weight loss	
Night sweats	

TABLE 2
Prevalence of nongastrointestinal symptoms and syndromes

Symptom or syndrome	IBS	IBD
Headache	94	38
Sleep disturbance:		
Due to GI symptoms	2	179
Not due to GI symptoms	156	12
Menstrual disturbance	62/129	47/133
Urinary symptoms	134	31
Fibromyalgia	67 (66 female)	8 (3 female)
Chronic fatigue syndrome	137 (105 female)	54 (26 female)
Anxiety or depression	89 (61 female)	16 (8 female)
Weight loss	12	183
Night sweats	6	141

GI Gastrointestinal; IBD Inflammatory bowel disease; IBS Irritable bowel syndrome

established by either their frequency or the requirement for medical treatment.

DISCUSSION

Algorithms for the positive diagnosis of IBS were first developed by Manning et al (9) and were subsequently refined by consensus panels (2,3). They tend to be restrictive and, thus, are suitable for generating a relatively homogeneous cohort of subjects for clinical trials. Formal diagnostic criteria do not, however, identify all patients who would receive a diagnosis of IBS from a physician (10-14), perhaps because they do not take into account the variability of clinical presentation and the presence of other symptoms. It has been repeatedly demonstrated that a clinical diagnosis of IBS is safe and not likely to require revision with time (15,16).

The present study demonstrated that patients with IBS and Crohn's disease differed in their reporting of a number of nongastrointestinal symptoms. Consideration of these symptoms might enhance diagnostic precision. For example, IBS patients were more than twice as likely to complain of headache, and many ingested large amounts of over-the-counter analgesics, including acetaminophen and nonsteroidal anti-inflammatory

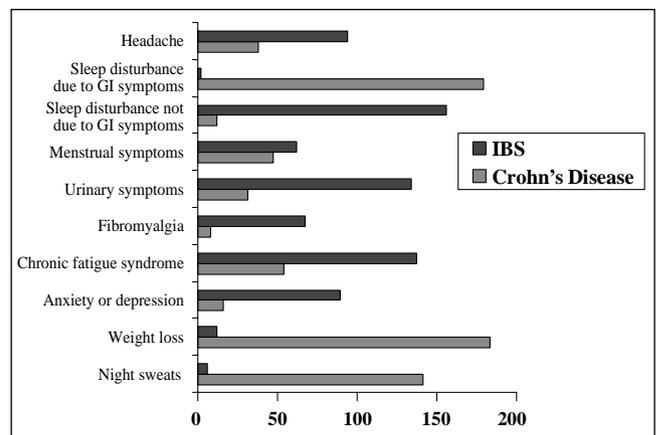


Figure 1 Prevalence of nongastrointestinal symptoms and syndromes. GI Gastrointestinal; IBS Irritable bowel syndrome

drugs. Other investigators have also found a high prevalence of headaches among IBS patients (4,5); however, except for drug toxicity and rare complications, there is no association between headaches and IBD.

It has been estimated that 28% to 74% of IBS patients describe significant difficulties with sleep (4,17). The association between fibromyalgia and sleep problems is also well-known (18). There is a significant correlation between dysfunctional gastrointestinal symptoms and the perceived quality of sleep the night before (17,19). The present study confirmed a previous finding (8) that sleep disturbance is common to both IBS and IBD patients, although it was far more likely to be related to gastrointestinal symptoms in the latter group. In fact, the complaint of awakening from sleep by physical symptoms should alert the physician to the possibility of organic disease.

The present study found that IBS patients were much more likely than those with Crohn's disease to experience urinary symptoms. Whorwell et al (4) found that individual symptoms, including frequency, urgency, hesitancy, nocturia and incomplete bladder emptying, are mentioned by up to one-half of patients with IBS. IBS patients are more likely than control subjects to complain of urinary problems (4,5,8) and to have abnormal urodynamic tests, especially detrusor instability (20).

There was a trend toward increased reporting of menstrual symptoms by IBS patients in this study, but the difference was not significant. Several investigators have found that IBS symptoms often coexist with chronic pelvic pain, premenstrual tension, dyspareunia, dysmenorrhea and other gynecological complaints (21-23).

In the present study, fibromyalgia was diagnosed in many more IBS than IBD patients, and almost all patients with both IBS and fibromyalgia were women. Large surveys have found that 30% to 70% of patients with a diagnosis of fibromyalgia experience altered bowel function, abdominal pain and/or excessive gas, thus satisfying the Rome criteria for IBS (24-27). Moreover, approximately one-third of patients who satisfy Rome criteria for IBS also have fibromyalgia syndrome. Approximately 90% of fibromyalgia patients are women (28), and it has even been suggested that the female preponderance among IBS patients is due to the coexistence of fibromyalgia (29). However, the association between fibromyalgia and Crohn's disease is questionable, having been found in a university outpatient gastrointestinal clinic (30) but not in a population study (31).

IBS patients are more likely than those with IBD to complain of fatigue (4,5) or to satisfy criteria for CFS (32,33). In the present study, the diagnosis of CFS or fibromyalgia was made by other consultants before the gastroenterology consultation, and was generally based on established criteria. Surveys of CFS patients have estimated that 35% to 63% also have IBS (34-36). It has even been suggested that IBS, CFS and fibromyalgia are related conditions, or manifestations of the same disorder, and that most patients have a defined psychiatric disorder (37).

As expected, symptoms usually regarded as alarm features for organic disease were more frequently reported by patients with Crohn's disease than by those with IBS. These symptoms included weight loss, night sweats and sleep disturbance due to abdominal pain or diarrhea.

Approximately two-thirds of the IBS subjects in the present study were female. Although women are more likely than men to use health care resources (38), this does not explain the preponderance of women who are identified with IBS symptoms in population studies and clinical settings, especially in referral practices (39-43). It has been suggested that the Manning and Rome criteria are more appropriate for female than male subjects (44-46). The preponderance of female patients with Crohn's disease is slightly greater than that reported in the literature (47).

Limitations of the present study include the fact that it is based on a single gastroenterology practice. It is therefore subject to referral bias, and the results might not be applicable to other

settings. Nevertheless, the findings are compatible with those reported by other investigators. No specific investigations of nongastrointestinal symptoms were undertaken, but many of these patients had been evaluated by other specialists. Selection bias was avoided by the fact that the subjects were consecutive patients with either IBS or Crohn's disease, as established by radiological and/or endoscopic investigations, and the diagnoses were stable over time. Moreover, the questionnaire was administered only during the initial visit; thus, patients who repeatedly attended the office were not more likely to be included in the study.

CONCLUSIONS

IBS has been defined as "a variable combination of recurrent gastrointestinal symptoms not explained by structural or biochemical abnormalities" (48). Aside from the Rome criteria, there are many complaints unrelated to the gastrointestinal tract that characterize patients with IBS. It would appear, therefore, that IBS is a systemic disorder involving many nongastrointestinal symptoms that are usually labelled 'functional'. Perhaps these features could be included in the diagnostic formulation for IBS. Their recognition could allow the evaluation of these patients to be simplified, thus reducing the number of investigations that would be required.

ACKNOWLEDGEMENT: The author thanks Dr Tom Lay and Dr Lloyd Sutherland for their invaluable assistance.

REFERENCES

- Drossman DA, Whitehead WE, Camilleri M. Irritable bowel syndrome: A technical review for practice guideline development. *Gastroenterology* 1997;112:2120-37.
- Thompson WG, Dotevall G, Drossman DA, Heaton KW, Krus W. Irritable bowel syndrome: Guidelines for the diagnosis. Report of the Rome Working Team. *Gastroenterol Int* 1989;2:92-5.
- Thompson WG, Longstreth GF, Drossman DA, Heaton KW, Irvine EJ, Müller-Lissner SA. Functional bowel disorders and functional abdominal pain. *Gut* 1999;45(Suppl 2):II43-7.
- Whorwell PJ, McCallum M, Creed FH, Roberts CT. Non-colonic features of irritable bowel syndrome. *Gut* 1986;27:37-40.
- Maxton DG, Morris J, Whorwell PJ. More accurate diagnosis of irritable bowel syndrome by use of 'non-colonic' symptomatology. *Gut* 1991;32:784-6.
- Mayer EA, Fass R, Fullerton S. Intestinal and extraintestinal symptoms in functional gastrointestinal disorders. *Eur J Surg Suppl* 1998;583:29-31.
- Azpiroz F, Dapoigny M, Pace F, et al. Nongastrointestinal disorders in the irritable bowel syndrome. *Digestion* 2000;62:66-72.
- Zimmerman J. Extraintestinal symptoms in irritable bowel syndrome and inflammatory bowel diseases: Nature, severity, and relationship to gastrointestinal symptoms. *Dig Dis Sci* 2003;48:743-9.
- Manning AP, Thompson WG, Heaton KW, Morris AF. Towards positive diagnosis of the irritable bowel. *Br Med J* 1978;2:653-4.
- Boyce PM, Koloski NA, Talley NJ. Irritable bowel syndrome according to varying diagnostic criteria: Are the new Rome II criteria unnecessarily restrictive for research and practice? *Am J Gastroenterol* 2000;95:3176-83.
- Mearin F, Badia X, Balboa A, et al. Irritable bowel syndrome prevalence varies enormously depending on the employed diagnostic criteria: Comparison of Rome II versus previous criteria in a general population. *Scand J Gastroenterol* 2001;36:1155-61.
- Chey WD, Olden K, Carter E, Boyle J, Drossman D, Chang L. Utility of the Rome I and Rome II criteria for irritable bowel syndrome in U.S. women. *Am J Gastroenterol* 2002;97:2803-11.
- Vandvik PO, Aabakken L, Farup PG. Diagnosing irritable bowel syndrome: Poor agreement between general practitioners and the Rome II criteria. *Scand J Gastroenterol* 2004;39:448-53.
- Cash BD, Chey WD. Irritable bowel syndrome – an evidence-based approach to diagnosis. *Aliment Pharmacol Ther* 2004;19:1235-45.
- Svendsen JH, Munck LK, Andersen JR. Irritable bowel syndrome – prognosis and diagnostic safety. A 5-year follow-up study. *Scand J Gastroenterol* 1985;20:415-8.
- Adeniji OA, Barnett CB, Di Palma JA. Durability of the diagnosis of irritable bowel syndrome based on clinical criteria. *Dig Dis Sci* 2004;49:572-4.
- Goldsmith G, Levin JS. Effect of sleep quality on symptoms of irritable bowel syndrome. *Dig Dis Sci* 1993;38:1809-14.
- Moldofsky H. Management of sleep disorders in fibromyalgia. *Rheum Dis Clin North Am* 2002;28:353-65.
- Jarrett M, Heitkemper M, Cain KC, Burr RL, Hertig V. Sleep disturbance influences gastrointestinal symptoms in women with irritable bowel syndrome. *Dig Dis Sci* 2000;45:952-9.
- Whorwell PJ, Lupton EW, Erduran D, Wilson K. Bladder smooth muscle dysfunction in patients with irritable bowel syndrome. *Gut* 1986;27:1014-7.
- Prior A, Whorwell PJ. Gynaecological consultation in patients with the irritable bowel syndrome. *Gut* 1989;30:996-8.
- Prior A, Wilson K, Whorwell PJ, Faragher EB. Irritable bowel syndrome in the gynecological clinic. Survey of 798 new referrals. *Dig Dis Sci* 1989;34:1820-4.
- Walker EA, Katon WJ, Jemelka R, Alfrey H, Bowers M, Stenchever MA. The prevalence of chronic pelvic pain and irritable bowel syndrome in two university clinics. *J Psychosom Obstet Gynaecol* 1991;12(Suppl):65-75.
- Triadafilopoulos G, Simms RW, Goldenberg DL. Bowel dysfunction in fibromyalgia syndrome. *Dig Dis Sci* 1991;36:59-64.
- Veale D, Kavanagh G, Fielding JF, Fitzgerald O. Primary fibromyalgia and the irritable bowel syndrome: Different expressions of a common pathogenetic process. *Br J Rheumatol* 1991;30:220-2.
- Sivri A, Cindas A, Dinçer F, Sivri B. Bowel dysfunction and irritable bowel syndrome in fibromyalgia patients. *Clin Rheumatol* 1996;15:283-6.
- Sperber AD, Atzmon Y, Neumann L, et al. Fibromyalgia in the irritable bowel syndrome: Studies of prevalence and clinical implications. *Am J Gastroenterol* 1999;94:3541-6.
- Yunus MB. The role of gender in fibromyalgia syndrome. *Curr Rheumatol Rep* 2001;3:128-34.
- Akkus S, Senol A, Ayvacioglu NB, Tunc E, Eren I, Isler M.

- Is female predominance in irritable bowel syndrome related to fibromyalgia? *Rheumatol Int* 2004;24:106-9.
30. Buskila D, Odes LR, Neumann L, Odes HS. Fibromyalgia in inflammatory bowel disease. *J Rheumatol* 1999;26:1167-71.
 31. Palm O, Moum B, Jahnsen J, Gran JT. Fibromyalgia and chronic widespread pain in patients with inflammatory bowel disease: A cross sectional population survey. *J Rheumatol* 2001;28:590-4.
 32. Jones KR, Palsson OS, Levy RC, et al. Co-morbid disorders and symptoms in irritable bowel syndrome (IBS) compared with other gastroenterology patients. *Gastroenterology* 2001;120:A88. (Abst)
 33. Whitehead WE, Palsson O, Jones KR. Systematic review of the comorbidity of irritable bowel syndrome with other disorders: What are the causes and implications? *Gastroenterology* 2002;122:1140-56.
 34. Gomborone JE, Gorard DA, Dewsnap PA, Libby GW, Farthing MJ. Prevalence of irritable bowel syndrome in chronic fatigue. *J R Coll Physicians Lond* 1996;30:512-3.
 35. Endicott NA. Chronic fatigue syndrome in psychiatric patients: Lifetime and premorbid personal history of physical health. *Psychosom Med* 1998;60:744-51.
 36. Aaron LA, Herrell R, Ashton S, et al. Comorbid clinical conditions in chronic fatigue: A co-twin control study. *J Gen Intern Med* 2001;16:24-31.
 37. Wessely S, Nimnuan C, Sharpe M. Functional somatic syndromes: One or many? *Lancet* 1999;354:936-9.
 38. Bertakis KD, Azari R, Helms LJ, Callahan EJ, Robbins JA. Gender differences in the utilization of health care services. *J Fam Pract* 2000;49:147-52.
 39. Sandler RS. Epidemiology of irritable bowel syndrome in the United States. *Gastroenterology* 1990;99:409-15.
 40. Everhart JE, Renault PF. Irritable bowel syndrome in office-based practice in the United States. *Gastroenterology* 1991;100:998-1005.
 41. Heaton KW, O'Donnell LJ, Braddon FE, Mountford RA, Hughes AO, Cripps PJ. Symptoms of the irritable bowel syndrome in a British urban community consultants and nonconsultants. *Gastroenterology* 1992;102:1962-7.
 42. Longstreth GF, Wolde-Tsadik G. Irritable bowel-type symptoms in HMO examinees: Prevalence, demographics, and clinical correlates. *Dig Dis Sci* 1993;38:1581-9.
 43. Thompson WG, Heaton KW, Smyth GT, Smyth C. Irritable bowel syndrome in general practice: Prevalence, characteristics, and referral. *Gut* 2000;46:78-82.
 44. Talley NJ, Phillips SF, Melton LJ, Mulvihill C, Wiltgen C, Zinsmeister AR. Diagnostic value of the Manning criteria in irritable bowel syndrome. *Gut* 1990;31:77-81.
 45. Smith RC, Greenbaum DS, Vancouver JB, et al. Gender differences in Manning criteria in the irritable bowel syndrome. *Gastroenterology* 1991;100:591-5.
 46. Thompson WG. Gender differences in irritable bowel symptoms. *Eur J Gastroenterol Hepatol* 1997;9:299-302.
 47. Andres PG, Friedman LS. Epidemiology and the natural course of inflammatory bowel disease. *Gastroenterol Clin North Am* 1999;28:255-81.
 48. Drossman DA, Thompson WG, Talley NJ, et al. Identification of subgroups of functional bowel disorders. *Gastroenterol Int* 1990;3:159-72.
-
-



Hindawi
Submit your manuscripts at
<http://www.hindawi.com>

