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Polysymptomatic, Polysyndromic Presentation of Patients With Urological Chronic Pelvic Pain Syndrome

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Abstract

Purpose—Somatization disorder has been described in several comorbid functional syndromes of urological chronic pelvic pain syndrome, such as irritable bowel syndrome. We investigated whether a subset of patients with urological chronic pelvic pain syndrome may have the polysymptomatic, polysyndromic presentation pattern that is common in somatization disorder.

Materials and Methods—A total of 70 male and female patients with urological chronic pelvic pain syndrome and 35 age matched controls without the syndrome completed a 59-item symptom checklist to assess the classic polysymptomatic, polysyndromic symptom pattern. The 2 operational tools used were the Perley-Guze derived symptom checklist and the somatic symptom algorithm used for Diagnostic and Statistical Manual, 4th Edition, Text Revision somatization disorder criteria.

Results—Female patients with urological chronic pelvic pain syndrome (interstitial cystitis/bladder pain syndrome) reported significantly more nonpain symptoms and pain symptoms outside the pelvis than control female urology patients ($p = 0.0016$ and 0.0018 , respectively). Female patients with urological chronic pelvic pain syndrome were more likely to endorse a polysymptomatic, polysyndromic symptom pattern than female controls (27% vs 0%, $p = 0.0071$). In contrast, male patients with urological chronic pelvic pain syndrome (interstitial cystitis/bladder pain syndrome and/or chronic prostatitis/chronic pelvic pain syndrome) did not report more extrapelvic pain than male controls ($p = 0.89$). Male patients with urological chronic pelvic pain syndrome were not more likely than male controls to have a polysymptomatic, polysyndromic symptom pattern.

Conclusions—A subset of female patients with urological chronic pelvic pain syndrome endorses numerous extrapelvic symptoms across multiple organ systems. The checklist may be valuable to assess patients for this polysymptomatic, polysyndromic symptom pattern, which is common in somatization disorder. Recognizing this polysymptomatic, polysyndromic presentation

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Study received Washington University institutional review board approval.

will prompt clinicians to investigate further to determine whether somatization disorder may be an underlying diagnosis in a small subset of patients with urological chronic pelvic pain syndrome who complain of numerous extrapelvic symptoms.

Keywords

urinary bladder; prostate; cystitis; interstitial; prostatitis; somatization disorders

Patients with UCPPS, including IC/BPS or CP/CPPS, commonly report symptoms outside the genitourinary tract. These extrapelvic symptoms may be painful or nonpainful, eg numbness, dizziness or palpitation.^{1,2} Recent studies showed that IC/BPS may be associated with other functional syndromes, such as IBS, fibromyalgia or vulvodynia.^{3–5} The pathophysiology behind this association is poorly understood.⁶

We are intrigued by the observation that some patients with UCPPS show features that resemble symptom patterns characteristic of somatization disorder. Patients with somatization disorder endorse multiple bothersome, medically unexplained symptoms across multiple organ systems in a classic PSPS symptom pattern.^{7–11} Symptoms may consist of multiple bodily pains, urinary symptoms, gastrointestinal symptoms, sexual/reproductive difficulty, pseudoneurological complaints and psychiatric symptoms, including anxiety and mood symptoms.¹² In addition to the classic PSPS pattern, symptoms also must begin before age 30 years, and be otherwise medically unexplainable and bothersome enough to result in treatment being sought, or social or occupational impairment.

Somatization disorder is present in many patients with the comorbid conditions of UCPPS, such as IBS,^{13,14} fibromyalgia¹⁵ and vulvodynia.¹⁶ Up to 25% of patients with IBS have somatization disorder.^{13,14} Patients with IBS and somatization disorder have more severe gastrointestinal symptoms and more extragastrointestinal symptoms than patients with IBS without somatization.¹³ Patients with somatization are also more likely to have IBS plus pelvic pain (overlapping syndromes) than IBS or pelvic pain alone.¹⁷

These clinical observations raised the possibility that some patients with UCPPS may have somatization disorder. The primary goal of this study was to investigate whether a subset of patients with UCPPS had the classic PSPS symptom pattern that is commonly present in patients with somatization disorder.

MATERIALS AND METHODS

Sample

We recruited 70 male and female consecutive patients with UCPPS, and 35 age matched control patients without UCPPS who presented to the Washington University urology clinic. Study inclusion criteria for patients with UCPPS were that 1) they must be older than 18 years, 2) they must report an unpleasant sensation of pain, pressure or discomfort that was perceived to be related to the bladder and/or pelvic region and was associated with lower urinary tract symptoms, eg urgency, for most of the time during the most recent 3 months and 3) symptoms had to be unexplained by another identifiable urological cause. Exclusion criteria included active urinary tract infection, cancer, urethral stricture, neurological disease, fistula, radiation cystitis, cyclophosphamide cystitis, urinary tuberculosis or open bladder surgery. Inclusion and exclusion criteria were adapted from the Multidisciplinary Approach to the Study of Chronic Pelvic Pain Research Network working definition of UCPPS.

Controls were age matched urology patients without UCPPS pain or lower urinary tract symptoms, eg urgency. The diagnosis in controls included stress incontinence in 13, asymptomatic microhematuria with negative evaluation in 9, an asymptomatic small renal stone in 6, an asymptomatic renal cyst in 2, increased prostate specific antigen in 2, asymptomatic testicular microlithiasis in 1 and other in 2.

The table lists patient demographics. More patients with UCPPS than controls were recruited (2:1 ratio) due to the heterogeneity of the UCPPS population. The study was approved by the Washington University institutional review board.

Assessment

Patients completed a 59-item self-report questionnaire that assessed pain and nonpain somatic symptoms across 10 symptom categories (Appendixes 1 and 2). We used 2 operational tools, that is the Perley-Guze derived symptom checklist and the somatic symptom algorithm used for DSM-IV-TR somatization disorder criteria, to assess for the classic PSPS symptom pattern commonly present in somatization disorder. Although there are other tools to assess tendencies toward somatization, eg the Patient Health Questionnaire 15-Item Somatic Symptom Severity Scale, the Perley-Guze symptom criteria for somatization disorder are recognized as the original, well validated and most comprehensive criteria for the disorder.⁷⁻¹⁰

This study approximated the Perley-Guze symptom criteria similar to the original definition by identifying patients who endorsed at least 25 symptoms in at least 9 of 10 symptom categories in the questionnaire adopted from the Perley-Guze symptom checklist (Appendixes 1 and 2).^{9,10} To address contemporary definitions we also applied the somatic symptom algorithm used in DSM-IV-TR criteria for somatization disorder.¹² There were reports of pain at 4 body sites, including gastrointestinal symptoms at 2, and sexual/reproductive symptom and a pseudoneurological symptom at 1 each.

Statistics

To compare variables between patient groups we used the chi-square test for dichotomous variables, substituting the Fisher exact test for expected cell sizes greater than 5 and the t test for continuous variables. Satterthwaite analysis was applied for cases of unequal variance. Statistical analysis was done using SAS® with 2-tailed $p < 0.05$ considered statistically significant.

RESULTS

All 70 patients with UCPPS and 35 age matched controls without UCPPS were included in data analysis. As a group, patients with UCPPS endorsed a significantly higher total number of pain and non-pain somatic symptoms than age matched controls without UCPPS (each $p < 0.0001$, see table). Compared to controls patients with UCPPS complained of more pain symptoms in the pelvis, as expected, and pain symptoms outside the pelvis (each $p < 0.0001$).

When comparisons were stratified by gender, results differed for males and females. Female patients with UCPPS (IC/BPS) reported significantly more nonpain symptoms and pain symptoms outside the pelvis than female controls ($p = 0.0016$ and 0.0018 , respectively). In contrast, male patients with UCPPS (IC/BPS and/or CP/CPPS) did not endorse more extrapelvic pain than male controls ($p = 0.89$).

Using the Perley-Guze criteria to assess for a PSPS symptom pattern, as determined by the endorsement of at least 25 symptoms in at least 9 of the 10 symptom categories, female

patients with UCPPS were more likely to report a PSPS constellation of symptoms than female controls (27% vs 0%, $p = 0.0071$). In contrast, male patients with UCPPS were not likely to have this PSPS pattern compared to male controls (11% vs 0%, $p = 0.50$).

Using the somatic symptom algorithm used for DSM-IV-TR somatization disorder criteria, including a report of pain at 4 body sites, 2 gastrointestinal symptoms, 1 sexual/reproductive symptom and 1 pseudoneurological symptom, female patients with UCPPS were also more likely to have this PSPS presentation than female controls ($p = 0.035$). However, there was no difference between male UCPPS and controls ($p = 0.27$).

DISCUSSION

The major findings of this study are that 1) female patients with UCPPS (IC/BPS) were more likely than female controls to report a PSPS constellation of symptoms that is commonly present in patients with somatization disorder, 2) male patients with UCPPS (IC/BPS and/or CP/PPS) were not more likely to have this symptom pattern compared to male controls and 3) about a fourth of female patients with UCPPS endorsed this PSPS symptom pattern. The reasons behind this gender difference are not clear. However, the difference is consistent with the known fact that somatization disorder affects primarily females.^{8,11,12}

Although reports of extrapelvic symptoms in IC/BPS cases^{1,2} and an association with other functional pain syndromes such as IBS and fibromyalgia are not new,^{3–5} to our knowledge the possibility that somatization disorder presents in a classic PSPS pattern has not previously been considered in the UCPPS literature. We thought that this possibility should be further investigated in a subset of patients with complaints of numerous extrapelvic symptoms.

The clinical features of somatization disorder were reviewed by Yutzy and Parish,¹¹ and North and Yutzy.⁸ Patients with somatization disorder endorse multiple bothersome medically unexplained symptoms across multiple organ systems in a classic PSPS symptom pattern.^{7–11} This PSPS pattern may be assessed using the validated Perley-Guze approach^{7–10} or the somatic symptom criteria used for DSM-IV-TR somatization disorder.¹²

The symptom pattern of somatization disorder is defined by the widespread distribution of symptoms throughout the organ systems of the body, in addition to the number of symptoms. These symptoms are not intentionally feigned. The pain and suffering are real and debilitating. On the surface these symptoms seem to represent medically based problems but upon sufficient investigation they defy full medical explanation. Specifically there is no abnormal pathological condition and no biological marker, and the diagnosis is based entirely on subjective symptoms. Symptoms are not confined to 1 area and they are characteristically highly prevalent throughout the organ systems of the body.

Although somatization symptoms appear to be exacerbated by stress, and they wax and wane in response to stressful life situations, they typically continue throughout the life course regardless of the stress level.^{8,11,18} Studies suggest that somatization symptoms may be associated with a history of abuse.¹⁹ Frustrated by the apparent lack of explanation of symptoms and the lack of generally effective treatment (a history of multiple failed treatments is common), patients with somatization disorder may consult multiple physicians in many specialties. Depending on the focus on organ specific symptoms patients with somatization disorder may be diagnosed with multiple functional syndromes at various time points, eg IC/BPS by a urologist, fibromyalgia by a rheumatologist and IBS by a gastroenterologist, unless the clinician steps back and takes a global view of the overall symptomatology to determine whether the symptom pattern also fits the mentioned PSPS pattern.

Somatization disorder is present in about 1% to 2% of the general population.²⁰ However, it appears to be more enriched among female patients with functional syndromes such as IBS,^{13,14} fibromyalgia,¹⁵ vulvodynia¹⁶ and, as in this study, IC/BPS. This may explain why extrapelvic symptoms are more prevalent among female patients with IC/BPS in previous studies.^{1,2} Patients with IC/BPS may be characterized into 3 subgroups, including those with 1) bladder symptoms only, 2) pelvic symptoms and 3) multiple symptoms of other organ systems, eg fibromyalgia and IBS.²¹ Although we did not specifically test this hypothesis in this study, our results raise the possibility that in a subset of patients with UCPPS, eg those with multiple symptoms of other organ systems, somatization disorder may be one of the common processes that help explain the association between UCPPS and other functional syndromes.

Somatization disorder was previously reported to be an independent predictor of other functional syndromes in IBS cases.¹³ The more functional syndromes that a patient with IBS has, the more likely is the diagnosis of somatization disorder.¹³ Patients with higher somatization scores are also more likely to have IBS plus chronic pelvic pain (overlapping syndromes) than IBS or pelvic pain alone.¹⁷

We do not believe that UCPPS alone is a somato-form disorder. Fewer than 25% of female patients with UCPPS have a PSPS presentation. However, somatization disorder may possibly be disguised as UCPPS in a few cases, particularly those with the classic PSPS presentation.

Since the pathophysiology of PSPS is poorly understood, clinicians and researchers should not stop looking for physiological explanations to patient symptoms. PSPS does not necessarily exclude other mechanisms, eg central sensitization, that may also explain the overlapping syndromes (see figure).

It is also possible that all of the other symptoms are explained by co-occurring conditions. The definition and diagnostic criteria of somatization disorder were conceptualized before advances in functional neural imaging or an understanding of abnormal nervous control of the bladder.

A major direction in psychiatric research is understanding the neurophysiological underpinnings of DSM disorders. We suspect that some and perhaps most of these patients could be said to have a functional disorder related to abnormal nervous control of the bladder, eg central sensitization. There is ongoing research to investigate whether central sensitization occurs in UCPPS cases using tools such as quantitative sensory testing and functional neural imaging. Although they are currently research tools, they may provide important clues to understanding the underlying pathophysiology of the UCPPS and PSPS presentation. Advances in neural imaging may enhance our understanding of the interface between somatization disorder and functional somatic syndromes.^{22,23}

The general approach to managing somatization disorder was previously reviewed.^{8,24–26} Briefly, 1) first, do no harm. Since patients with somatization disorder have a strong propensity to consult multiple physicians in many specialties and they may become quite desperate in the quest for a cure, they are particularly prone to agree to equivocal or repeat surgeries. In 1953 Cohen et al described the risk of excessive surgery in these patients.²⁷ After a detailed history, physical examination and reasonable diagnostic testing have been performed, steer the patient away from questionably indicated surgeries or medications that have significant complications or side effects, eg hysterectomy when the source of pain is uncertain, or bladder-centric treatment when there is PSPS multiple organ involvement. In functional patients with somatization disorder greater side effects are experienced and in turn earlier medication discontinuation was reported.^{13,28} 2) Redirect patient energy to

decrease stress or deal with problems that produce stress. Somatization symptoms may be exacerbated by stress, and wax and wane in response to stressful life situations.^{8,11,18} 3) Establish realistic, mutually agreeable treatment goals, eg focus on improving daily function rather than on eliminating pain or symptoms. Orchestration of medical care by a gatekeeper clinician may help align these goals.²⁴ 4) Solicit ancillary support from a psychologist, or support or stress management groups.²⁹ These management strategies are not unique to somatization disorder. Many of them overlap with the 2011 American Urological Association IC/BPS treatment guideline.³⁰

We emphasize that it would be tragic and a major disservice to patients if clinicians begin to refer all of these patients to psychiatrists instead of trying to manage the symptoms. Do not dismiss the patients as psychiatric (“it is all in your head” or “you are just a complainer”). The proper approach is the exact opposite. Try to develop solid rapport and gain the confidence of the patient with empathy, patience, consistent reassurance and regular office visits.²⁹

There are several strengths of this study, including 1) investigation of males and females, 2) query of nonpainful and painful extrapelvic symptoms, 3) the use of the contemporary, symptom based UCPPS definition instead of the restrictive National Institute of Diabetes and Digestive and Kidney Diseases definition,^{1,2,8,11} and 4) the use of 2 operational tools to assess for a PSPS presentation.

The study has potential weaknesses. 1) Inclusion criteria were based on self-reported symptoms rather than on physician diagnosis. 2) The relatively small sample size precluded our ability to satisfactorily address whether male patients with IC/BPS are different from those with CP/CPPS or chronic pain plus interstitial cystitis. 3) We did not perform additional chart reviews to determine whether patients fulfilled the full diagnostic criteria of somatization disorder.

We emphasize that we did not make a DSM diagnosis in this study. To fulfill the full diagnostic criteria of somatization disorder, in addition to a classic PSPS pattern, the symptoms also must begin before age 30 years, and be otherwise medically unexplainable after reasonable diagnostic evaluation and bothersome enough to result in treatment being sought, or in social or occupational impairment. In this study we identified patients with UCPPS who had a PSPS presentation. We did not perform a medical chart review to evaluate whether symptoms were medically explainable.

Possibly only a small fraction of patients with PSPS would fulfill the diagnostic criteria of somatization disorder. The remainder may have medically explainable symptoms or underlying neurophysio-logical mechanisms without somatization (see figure). Identifying patients with PSPS symptom pattern would prompt clinicians to investigate further using medical chart reviews, structured interviews and/or reasonable diagnostic testing to determine whether somatization disorder may be an underlying diagnosis in a small subset of patients with UCPPS who complain of numerous extrapelvic symptoms.

CONCLUSIONS

A subset of female patients with UCPPS endorses numerous extrapelvic symptoms across multiple organ systems. The checklist may be valuable to assess patients for this PSPS symptom pattern, which is common in somatization disorder. Recognizing this presentation may allow optimization of care.

Acknowledgments

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Appendix

APPENDIX 1

59-Item Questionnaire Derived From Perley-Guze Symptom Checklist

For the following symptom list, we would like to know if you have ever had a lot of trouble with the symptom (circle Yes or No).

Group 1:

Headache *

Feeling generally sick

Group 2:

Blindness

Paralysis

Numbness and tingling (anesthesia)

Inability to speak (aphonia)

Convulsions or seizures

Unconsciousness

Amnesia (periods of time without memory)

Deafness

Hallucinations (eg seeing visions, hearing voices)

Difficulty urinating

Trouble walking

Other conversion symptoms (eg any unusual spells)

Group 3:

Fatigue

Lump in throat or inability to swallow

Fainting spells

Blurred vision (not just due to needing glasses)

Unexplained weakness of body or limbs

Painful urination †

Group 4:

Breathing difficulty

Palpitation or irregular heartbeat

Anxiety attacks

Chest pain *

Dizziness (without fainting)

Group 5:

Lack of appetite (anorexia)

Unintentional weight loss

Marked fluctuation in weight

Nausea

Abdominal bloating

For the following symptom list, we would like to know if you have ever had a lot of trouble with the symptom (circle Yes or No).

Inability to tolerate several kinds of food

Diarrhea

Constipation

Group 6:

Abdominal pain *

Vomiting

Group 7:

Painful menstruation (dysmenorrhea) †

Menstrual irregularities

Amenorrhea (do not count menopause)

Excessive bleeding with menstrual periods

Group 8:

Loss of interest in sex

Frigidity or impotence

Painful sexual intercourse (dyspareunia) †

Other difficulties with sex or sexual organs

Vomiting all 9 months of pregnancy or hospitalized for vomiting during pregnancy

Group 9:

Back pain *

Joint pain without swelling or redness in more than 1 joint *

Painful extremities (limbs, hands, feet, not counting joints) *

Burning pain of the sexual organs or rectum †

Other bodily pains *

Group 10:

Nervousness

Fears

Depressed feelings

Need to quit work or inability to carry regular duties because of feeling sick

Crying easily

Feeling life is hopeless

Thinking a good deal about dying

Wanting to die

Thinking of suicide

Suicidal attempts

Since patients may have transient complaints, for each checklist symptom we specifically instructed patients to respond yes only if they had experienced a lot of trouble with that symptom to ensure that the symptom reported was significantly bothersome and clinically relevant.

* Extrapelvic pain symptom.

† Pelvic pain symptom.

APPENDIX 2

2011 PSPS Questionnaire Used

How would you rate your general health in the last 12 months? Circle one: Excellent Good Fair Poor.

For the following symptom list, we would like to know if you have ever had a lot of trouble with the symptom (circle Yes or No).

		Symptom?	
		No	Yes
1	Headaches	No	Yes
2	Feeling generally sickly	No	Yes
3	Blindness	No	Yes
4	Paralysis	No	Yes
5	Numbness or tingling	No	Yes
6	Inability to speak	No	Yes
7	Fits, convulsions, seizures	No	Yes
8	Unconsciousness	No	Yes
9	Amnesia (periods of time without memory)	No	Yes
10	Deafness	No	Yes
11	Hallucinations (eg seeing visions, hearing voices)	No	Yes
12	Difficulty urinating	No	Yes
13	Trouble walking	No	Yes
14	Any (other) unusual spells: (describe)	No	Yes
15	Fatigue (not just due to exercise)	No	Yes
16	Lump in throat or inability to swallow	No	Yes
17	Fainting spells	No	Yes
18	Blurred vision (not just due to needing glasses)	No	Yes
19	Unexplained weakness of body or limbs	No	Yes
20	Painful urination	No	Yes
21	Breathing difficulty	No	Yes
22	Palpitation or irregular heartbeat	No	Yes
23	Anxiety attacks	No	Yes
24	Chest pain	No	Yes
25	Dizziness (without fainting)	No	Yes
26	Lack of appetite	No	Yes
27	Unintentional weight loss	No	Yes
28	Marked fluctuations in weight	No	Yes
29	Nausea	No	Yes
30	Vomiting	No	Yes
31	Inability to tolerate several kinds of food	No	Yes
32	Diarrhea	No	Yes
33	Constipation	No	Yes
34	Abdominal pain	No	Yes
35	Bloating of stomach or abdomen	No	Yes
36	Painful menstruation	No	Yes
37	Irregular menstrual periods	No	Yes

How would you rate your general health in the last 12 months? Circle one: Excellent Good Fair Poor.

For the following symptom list, we would like to know if you have ever had a lot of trouble with the symptom (circle Yes or No).

		Symptom?	
38	Skipped or stopped menstrual periods (don't count menopause)	No	Yes
39	Excessive bleeding with menstrual periods	No	Yes
40	Loss of interest in sex	No	Yes
41	Frigidity or impotence	No	Yes
42	Painful sexual intercourse	No	Yes
43	Other difficulties with sex or sex organs: (describe)_	No	Yes
44	Vomiting all 9 months of pregnancy or hospitalized for vomiting during pregnancy	No	Yes
45	Back pain	No	Yes
46	Joint pain without swelling or redness, in more than 1 joint	No	Yes
47	Painful extremities (limbs, hands, feet—not counting joints)	No	Yes
48	Burning pains of the sexual organs, mouth or rectum	No	Yes
49	Other bodily pains: (describe)_	No	Yes
50	Nervousness	No	Yes
51	Fears	No	Yes
52	Depressed feelings	No	Yes
53	Need to quit working or inability to carry on regular duties due to feeling sick	No	Yes
54	Crying easily	No	Yes
55	Feeling life is hopeless	No	Yes
56	Thinking a good deal about dying	No	Yes
57	Wanting to die	No	Yes
58	Thinking of suicide	No	Yes
59	Suicide attempt	No	Yes

Abbreviations and Acronyms

CP/CPPS	chronic prostatitis/chronic pelvic pain syndrome
DSM	Diagnostic and Statistical Manual
DSM-IV-TR	DSM, 4th Edition, Text Revision
IBS	irritable bowel syndrome
IC/BPS	interstitial cystitis/bladder pain syndrome
PSPS	polysymptomatic, polysyndromic
UCPPS	urological chronic pelvic pain syndrome

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1. .

Diagnostic strategy of PPS presentation and somatization disorder. *Sx*, symptoms.

Patients with UCPPS vs controls by gender

	Female + Male				Female				Male			
	UCPPS	Controls	p Value		UCPPS	Controls	p Value		UCPPS	Controls	p Value	
No. pts	70	35			52	22			18	13		
Age	46.8 ± 2.3	46.6 ± 1.7	0.94		47 ± 2.7	47.1 ± 1.6	0.99		44.8 ± 3.7	45.7 ± 3.9	0.87	
Mean ± SE pelvic pain/urgency/frequency score	15.0 ± 1.5	—			18.8 ± 1.6	—			11.0 ± 2.5	—		
Mean ± SE No. symptoms:												
Painful	5.5 ± 3.0	2.6 ± 2.2	<0.0001		6.2 ± 2.9	2.6 ± 2.3	<0.0001		3.6 ± 2.3	2.5 ± 2.1	0.20	
Extrapelvic pain	2.8 ± 2.0	1.7 ± 1.4	<0.0001		3.2 ± 2.0	1.6 ± 1.4	0.0018		1.6 ± 1.7	1.6 ± 1.4	0.89	
Pelvic pain	2.3 ± 1.2	0.6 ± 0.8	<0.0001		2.4 ± 1.2	0.6 ± 0.8	<0.0001		1.7 ± 1.2	0.6 ± 0.9	0.0077	
Nonpainful	10.7 ± 7.7	4.7 ± 5.0	<0.0001		11.9 ± 7.8	5.9 ± 5.8	0.0016		7.2 ± 6.3	2.8 ± 2.3	0.024	
Perley-Guize checklist:												
Mean ± SE No. symptoms (total 59)	16.3 ± 10.0	7.3 ± 6.5	<0.0001		18.1 ± 10.0	8.5 ± 7.5	0.0001		10.8 ± 8.0	5.4 ± 3.9	0.032	
Mean ± SE No. derived symptom groups (total 9)	7.1 ± 2.6	4.3 ± 2.7	<0.0001		7.7 ± 2.3	4.7 ± 3.0	<0.0001		5.4 ± 4.1	3.7 ± 2.4	0.062	
No. pts with 25 symptoms in 9 groups/total No. (%)	16/70 (23)	0/35	0.0011		14/52 (27)	0/22	0.0071		2/18 (11)	0/13	0.50	
No. DSM-IV-TR criteria/total No. (%)	28/70 (40)	4/35 (12)	0.0039		25/52 (48)	4/22 (18)	0.035		3/18 (17)	0/13	0.27	

* Pain at 4 body sites, 2 gastrointestinal symptoms, 1 sexual/reproductive symptom and 1 pseudoneurological symptom.