Medically Unexplained Symptoms and Somatoform Disorders: Diagnostic Challenges to Psychiatrists

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Background: Clinical limitations of the criteria of somatoform disorders (SDs) have been criticized. However, little objective evidence supports this notion. We aimed to examine the prevalence of SDs in a population with medically unexplained symptoms (MUS), which was expected to have higher probabilities meriting such diagnoses, and to evaluate factors that may influence the clinical judgment of psychiatrists.

Methods: Data of subjects with MUS ($n = 101$, 9.5%) as their chief consulting problems, of 1,068 consecutive ethnic Chinese adult medical inpatients referred for consultation-liaison psychiatry services, were reviewed. Psychiatric diagnoses including SDs and clinical variables were collected. Those with SDs were followed-up 1 year later, and structured interviews were applied.

Results: Patients with MUS had a high level of psychiatric comorbidity, especially depression (35.6%) and anxiety disorder (29.7%), rather than SDs (9.9%). Most diagnosed with SDs suffered from persistent MUS at the 1-year follow-up. Pain was the most common presentation of MUS. Most of the subjects diagnosed with SDs were female and younger, with multiple painful sites at presentation, no past psychiatric diagnosis and no comorbid organic diagnoses. The diagnosis of SDs was seldom given in those with simultaneous MUS and mood symptoms.

Conclusion: A significant proportion (9.5%) of patients in psychiatric consultation suffered from MUS, and most were comorbid with depression and anxiety. The identification of SDs was made in only 9.9%. Because MUS are associated with a high rate of mental comorbidities, psychiatric consultations while facing such clinical conditions are encouraged. [*J Chin Med Assoc* 2009;72(5):251–256]

Key Words: consultation, medically unexplained symptoms, pain, psychiatry, somatoform disorders

Introduction

Somatic symptoms are frequently encountered by clinicians in primary care; a significant proportion of them, at least 1 third, are important for consultation-liaison (C-L) psychiatrists if presenting as symptoms that cannot be well explained by general medical conditions.[1] Patients suffering from these medically unexplained symptoms (MUS) have increased risks of disease burden, disability, higher medical costs, mental and physical comorbidities and a poor quality of life.[2,3] For the benefit of both psychiatry and medicine, much effort has been made to solve problems such as adequate diagnoses and psychiatric comorbidities.

The term *somatoform disorders* (SDs) was first introduced in the *Diagnostic and Statistical Manual of Mental Disorders*, 3rd edition (DSM-III) in 1980,[4] and remains the current classification of both the DSM-IV-TR (text revision of the DSM 4th edition) and the 10th revision of the *International Classification of Diseases* (ICD-10). It was defined that patients with MUS are associated with psychological distress and repeated treatment-seeking behaviors. The development of the criteria should have facilitated the management of somatized patients for all doctors in clinical practice; however, many researchers[5–8] have raised questions, finding such a classification unsatisfactory for both the clinicians and the patients

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receiving the diagnosis. One of the major critiques was its clinical limitation. For example, Mayou et al argued that there was a lack of clarity in the threshold of diagnosis and the existing exclusion criteria.[8]

The actual prevalence of SDs diagnosed through clinical interview only cannot be very objective.[9] This is because "general medical conditions" are sometimes difficult to exclude without an adequate survey, and psychiatrists cannot make diagnoses of SDs without an objective evaluation. The precise diagnosis of SDs might be made through a collaboration of specialized physicians and psychiatrists. Past studies made in psychiatric consultation settings mostly focused on selected populations, such as patients with chronic pain[10,11] or specific somatic symptoms.[12,13] However, the presentations of MUS vary greatly. Therefore, the purpose of the present study was to investigate the identification of SDs in patients with all forms of MUS, who were expected to have an increased possibility in meeting a diagnosis of SDs. We also aimed to evaluate the factors that may influence the clinical judgment of psychiatrists in diagnosing SDs.

Methods

Study population

We retrospectively studied medical inpatients referred for C-L psychiatry services at a medical center (Taipei Veterans General Hospital) from February 1, 2005 to April 30, 2006. The data of 1,068 consecutive ethnic Chinese patients (referred cohort), aged 21–65 years, with intact medical and psychiatric records, were examined. Among this group, subjects with MUS were further recruited if they had also presented with somatic symptoms that were not fully explained by the referring physicians as their major consulting problems. The whole-study analytic flow is shown in Figure 1. The study was performed in accordance with the Declaration of Helsinki and was approved by the local ethics review committee.

Data collection and assessments at consultation

We collected the following information based on thorough reviews of medical and psychiatric records in the hospital chart and computer system: (1) demographic data; (2) characteristics of somatic presentations; (3) past history of psychiatric diagnosis; (4) comorbid major organic illnesses, including diabetes mellitus, hypertension, autoimmune diseases (i.e. ankylosing spondylosis, rheumatoid arthritis, sicca syndrome, connective tissue disorders, systemic lupus erythematosus, Behcet's disease), endocrine problems (i.e. adrenal insufficiency), cancer (i.e. breast cancer, lymphoma, thyroid cancer), chronic illness (i.e. chronic alcoholic hepatitis, chronic hepatitis B or C, chronic recurrent pancreatitis, chronic heart failure); (5) psychiatric diagnoses including SDs according to the DSM-IV criteria,[14] all made by trained psychiatrists and supervised by experienced C-L psychiatrists (Y.H. Chou, T.P. Su, C.H. Yang and Y.C. Lee).

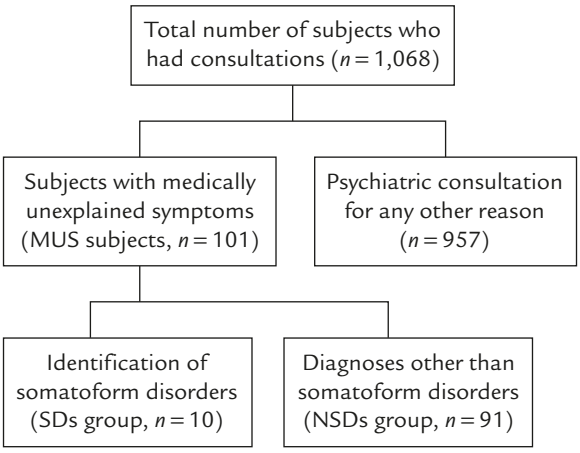

Figure 1. Analytic flow of this study.

Study subgroups

Figure 1 shows the whole analytic flow of the present study. In total, 1,068 subjects who had psychiatric consultations (male/female: 519/549) during a consecutive period were collected, with a mean (± standard deviation) age of 45.07 ± 11.85 years (male/female: 45.24 ± 11.70/44.90 ± 11.99). The other 957 cases were mainly consulted for predominant mood or psychotic problems, suicidal behaviors, delirium, pretransplantation evaluations and so on. The 101 MUS subjects were regrouped into either an SDs group (MUS with diagnoses of SDs) or an NSDs group (MUS without a diagnosis of SDs), according to whether or not they had a diagnosis of SDs. SDs consisted of somatization disorder, undifferentiated somatoform disorder, pain disorder, conversion disorder and somatoform disorder not otherwise specified. We aimed to compare the SDs and NSDs groups with regard to their demographic characteristics, somatic presentations, comorbid organic illnesses and past psychiatric history. Those diagnosed with SDs were followed at least 1 year later and we applied a structured interview and Mini International Neuropsychiatric Interview (American Psychiatric Association, 1994) to make a definite diagnosis.

Data analysis

Comparisons between the 2 groups were performed using Fisher's exact test or Yate's χ^2 test for dichotomous

Table 1. Demographic characteristics and somatic symptoms of the 2 study groups*

	SDs ($n=10$)	NSDs ($n=91$)	p
Female†	10	63	0.058‡
Age (yr)	36.8±8.0	44.8±10.0	0.016§
Married†	7	66	1.000
Education ≥ 9 yr†	8	67	1.000
Pain as referral symptom†	8 (80.0)	76 (83.6)	0.674
Multiple painful sites†	7 (87.5)	38 (50.0)	0.063‡
Symptom duration (mo)	12.2±10.5	12.2±19.3	0.996
≥ 6 mo†	8 (80.0)	53 (58.4)	0.188
No past psychiatric hx†	9	60	0.163
No past depression hx†	9	55	0.088‡
No past anxiety hx†	10	61	0.031§
No major physical illness†	8	41	0.047§

**Data presented as n or mean ± standard deviation or n (%);†Fisher's exact test; ‡$p<0.10$; §$p<0.05$. SDs = somatoform disorders; NSDs = no somatoform disorders; hx = history.*

variables. Independent Student's t test was conducted for normally distributed continuous variables. All tests were 2-tailed, and the significance level was set at $p<0.05$. Statistical analyses were performed using SPSS version 11.5 (SPSS Inc., Chicago, IL, USA).

Results

Demographic and clinical characteristics of the MUS patients

The mean age of the MUS patients ($n=101$) was 44.0±10.0 years, and they were predominantly female (male *vs.* female, 27.7% *vs.* 72.3%). Table 1 shows the demographic and somatic characteristics of the SDs ($n=10$) and NSDs ($n=91$) groups. Those with a diagnosis of SDs were all female with a trend-significance of sex differences when compared to the NSDs group ($p=0.058$). Also, patients with SDs were younger as compared to those without SDs (36.8±8.0 years *vs.* 44.8±10.0 years; $p<0.05$), while no difference was found with regard to marital status or educational level.

The referral departments where the 101 MUS subjects came from included neurology ($n=35$), allergy-immunology-rheumatology (31), gastroenterology (7), cardiology (6), otorhinolaryngology (5), gynecology (5), family medicine (3), neurosurgery (1), metabolism (2), rehabilitation (1), dermatology (1), pediatrics (1), genitourinary medicine (1), orthopedics (1) and oncology (1). The presenting somatic symptoms leading to the psychiatric referrals were pain, tremor in the hands, generalized pruritus, vertigo, dizziness, paresthesia, vomiting, hyperventilation, hearing loss, and non-epileptic seizure. "Pain" was the most common somatic symptom leading to psychiatric referrals in both the SDs and NSDs groups (80% and 83.6%, respectively). Eighty-four out of 101 subjects presented with pain symptoms as their MUS, lasting for an average of 13.68 months (median, 6 months). Subjects who presented with multiple painful sites were more likely to be diagnosed with SDs (87.5% *vs.* 50.0%; $p=0.063$). Regarding the duration of all the somatic symptoms, 80% of the SDs group and 58.4% of the NSDs group had symptoms for longer than 6 months, but there was no between-group significance (Table 1). Moreover, patients without past psychiatric diagnoses such as depression (trend-significance, $p=0.088$) or anxiety disorder ($p<0.05$) were more easily diagnosed with SDs. Additionally, patients without major physical illness were statistically more likely to have the diagnosis of SDs than those with it.

Psychiatric diagnosis of MUS patients

High psychiatric comorbidity (96.1%) was found in subjects with MUS. Regarding the psychiatric diagnosis of all MUS subjects (Table 2), the most common psychiatric diagnoses were depressive disorder (35.6%), anxiety disorder (29.7%) and adjustment disorder (12.9%), while no sex differences existed. Additionally, the psychiatric diagnoses of major mental disorder in our entire referred cohort ($n=1,068$) were also analyzed, and were found to be depressive disorder (25.7%), anxiety disorder (5.1%) and adjustment disorder (21.0%). In comparison, higher levels of depression and anxiety were found within this MUS population than within the entire referred cohort. Twenty-four of the 101 subjects (23.8%) had more

Table 2. Summary of primary psychiatric diagnosis of subjects with medically unexplained symptoms*

Psychiatric diagnosis	Male	Female	Yate's χ^2/p
Depressive disorder†	10 (35.7)	26 (35.6)	
Anxiety disorder‡	7 (25.0)	23 (31.5)	
Adjustment disorder	4 (14.3)	9 (12.3)	
Somatoform disorder	0	10 (13.7)	
Psychologic factors affecting GMC	3 (10.7)	2 (2.7)	
Delusional disorder	1 (3.6)	0	
Bipolar I disorder	1 (3.6)	0	
Delirium	0	1 (1.4)	
No mental diagnosis	2 (7.1)	2 (2.7)	
Total	28	73	4.896/0.768

**Data presented as n (%); †including major depressive disorder, dysthymic disorder and depressive disorder, not otherwise specified; ‡including panic disorder, general anxiety disorder, post-traumatic stress disorder, obsessive-compulsive disorder and anxiety disorder, not otherwise specified. GMC = general medical condition.*

than 1 psychiatric diagnosis, most of which was concurrent depressive disorder with anxiety disorder.

Patients with the diagnosis of SDs

As summarized in Table 3, only 10 (9.9%) subjects were identified to have a psychiatric diagnosis of SDs, including 1 somatization disorder, 1 conversion disorder, 2 pain disorders, 5 undifferentiated SDs and 1 SD not otherwise specified. Within the SDs group, 5 of the 10 subjects (50%) had another psychiatric diagnosis: 1 patient had major depressive disorder, 1 had adjustment disorder with mixed emotion, 1 had adjustment disorder, and 2 had adjustment disorder with opioid abuse. During the follow-up interview, only 1 out of 10 subjects did not fulfill the diagnosis of SDs any longer, and whose painful symptoms were then controlled by carbamazepine after the identification of the medical diagnosis of atypical migraine. Most (9/10, 90%) presented with persistent MUS, suggesting that more attention needs to be paid to further investigate and give better treatment to these patients.

Discussion

A high percentage of psychiatric comorbidities (96.1%) was found in the MUS patients. Most of the subjects were diagnosed with depressive disorders or anxiety disorders. The actual number of DSM-IV SDs diagnoses was only 9.9%, which is possibly an underestimation of the prevalence of SDs. Those diagnosed with SDs mostly suffered from persistent MUS at the 1-year follow-up, suggesting the importance of further investigating SDs patients. Our data indicated that a greater likelihood of a consultation diagnosis of SDs was associated with female sex, younger age, multiple painful sites at presentation, no past psychiatric history and no concurrent major physical illness. Our results are in line with previous findings that depression and anxiety are common in patients with somatic symptoms.[1,15–19] But the clinical problems in diagnosing SDs, especially in patients with concurrent somatic and mood symptoms, warrant further discussion.

Past research found that the prevalence of SDs was quite high in the general practice population—around 20%,[18–20] and the prevalence could be even higher in patients with concurrent mood problems—estimated to be more than 40%.[21] In comparison, our study focused on patients with MUS, who were prescreened and referred from physicians, so the prevalence of SDs may be equal to or higher than that in the general practice population. However, the identification of SDs in our study was only 9.9%. The low rate of identification of SDs may be due to several possible factors. First, regarding the high coincidence of somatic symptoms and mood disorders, it is sometimes difficult for C-L psychiatrists to judge MUS to be a result of primary "somatoform disorder". This is because depression and anxiety often present with somatic discomfort as one of their presenting problems. If primary depressive or anxiety disorders are under control, the somatic symptoms will also be better. However, without an adequate treatment trial for their mood problems, it is hard to differentiate when patients present with both symptoms at the same time. This point of view could be supported by our findings that most of the diagnoses of SDs were made in subjects without concurrent depressive or anxiety disorders, and the only patient with a simultaneous diagnosis of somatoform and depressive disorder was one with preconsultation major depressive disorder. When the mood symptoms are in remission and MUS are still vivid, the diagnosis of SDs can be made more confidently.

On the other hand, if patients suffer from concurrent mood and physical symptoms, the somatic symptoms

Table 3. Summary of subjects with the psychiatric diagnosis of somatoform disorders

Case no./sex	Age (yr)/ married	Referring department	Consulting somatic symptoms	Duration (mo)	Major organic problems	History of psychiatric diagnosis	SDs diagnosis	Comorbid psychiatric diagnosis	Fulfill SDs 1 yr later
1/F	35/No	Gynecology	Lower abdominal pain	12	Adenomyosis	No	Undifferentiated SD	Adjust. & opioid	Yes
2/F	40/Yes	Neurosurgery	Multiple pain	6	No	Yes (MDD)	Undifferentiated SD	MDD	Yes
3/F	37/Yes	Neurology	Multiple pain	1	No	No	SD, NOS	No	No (migraine)
4/F	32/No	Metabolism	Abdominal pain & nausea/vomiting	36	Type 1 DM	No	Somatization disorder	Adjust.	Yes
5/F	30/Yes	Rehabilitation	Multiple pain	9	No	No	Undifferentiated SD	No	Yes
6/F	50/Yes	Neurology	Multiple pain	4	No	No	Pain disorder	No	Yes
7/F	35/Yes	Neurology	Multiple pain	6	No	No	Pain disorder	Adjust. & opioid	Yes
8/F	45/Yes	AIR	Multiple pain	12	No	No	Undifferentiated SD	No	Yes
9/F	22/No	Neurology	Non-epileptic seizure	12	No	No	Conversion disorder	No	Yes
10/F	42/Yes	Family medicine	Dizziness	24	No	No	Undifferentiated SD	Adjust.	Yes

SDs = somatoform disorders; Adjust. = adjustment disorder with depression; opioid = opioid abuse; MDD = major depressive disorder; NOS = not otherwise specified; DM = diabetes mellitus; AIR = allergy-immunology-rheumatology.

might not be as "typical" as that observed in subjects without mood symptoms. Existing exclusion criteria can easily be met under the influence of mood symptoms, because the somatic symptom "cannot be fully explained by a known general medical condition" as defined in the DSM. Also, another major finding in this study—that the diagnosis of SDs was correlated with a lack of major physical illness—could support the above notion. When patients were admitted but no organic basis could explain their presenting somatic problems, it was easier for the C-L psychiatrist to diagnose these patients as having SDs. Our reports echo the previous critiques of the clinical limitations of the current DSM,[6,8,20] and the inadequacy of current DSM classifications of SDs.[22,23]

In the current DSM classification system, only patients who present with pure MUS can be coded, and there is no place for those with primary depressive or anxiety disorders who present with somatic symptoms during the mood episodes. Also, there is a lack of definite guidance when we encounter such conditions. If the taxonomy of SDs is going to be kept in the upcoming DSM-V, we raise some suggestions to make the criteria more clinically practical for differentiating somatic symptoms from a psychiatric perspective. First, add mood-related somatic symptoms as a criterion of depressive disorder, anxiety disorder and even adjustment disorder. Just like premenstrual dysphoric disorder in the DSM-IV system, "physical symptoms" had been listed as one diagnostic criterion. Second, we may need to define clearer criteria of time duration. This period is for performing medical survey and treating anxiety and depression in cases of comorbid mood and somatic presentations. Only by doing this can misdiagnosis or overdiagnosis of SDs be improved. For example, in our study, the only patient who did not meet SDs criteria any longer presented with painful symptoms for only 1 month (Table 3, case 3). Under the impression of atypical migraine, she was then treated successfully with carbamazepine by neurologists. Although her presentation met the criteria of SDs during the consultation, it was wrong to diagnose her with SDs because of a lack of treatment and observation period.

The present study has 4 limitations. One major limitation is the methodologic design of the retrospective study. However, we tried to collect data from all the available databases, consisting of not only index consultation records but also past outpatient and inpatient charts or computer records. Second, the psychiatric diagnoses were not made by the same psychiatrist using structured interviews. However, this may reflect the clinical problems faced by C-L psychiatrists

using the current DSM classification of SDs. Third, the actual prevalence of SDs in our recruited patients was unknown. This is because the temporal relationships between mood and somatic symptoms are unclear. To clarify this issue, further follow-up for the whole population is needed. Finally, our subjects were all ethnic Chinese, so caution should be taken in generalizing the findings to populations from other cultures and ethnic groups. Nevertheless, much evidence has indicated that unexplained somatic symptoms are a universal phenomenon in all cultures worldwide.[24]

In conclusion, our findings are of clinical importance for both physicians and psychiatrists. We found that a significant proportion of the medical/surgical inpatients suffered from MUS and most of them had a mental comorbidity, including depressive disorders and anxiety disorders. SDs was only diagnosed in 9.9% of our subjects and was easier to be identified if patients had no psychiatric diagnosis and no evidence of organic illness. The information from this study is useful for identifying areas of weakness in the current classification of SDs. For C-L psychiatrists, patients who present with simultaneous MUS and mood symptoms could be a clinical diagnostic challenge. However, because MUS are associated with mental comorbidities, psychiatric consultations for such patients are encouraged.

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