Prevalence of Obsessive-Compulsive Disorder in Patients With Systemic Lupus Erythematosus

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Background: The goal of this pilot study was to investigate the prevalence of obsessive-compulsive disorder (OCD) in a group of patients with systemic lupus erythematosus (SLE).

Method: Fifty adult patients enrolled in outpatient SLE studies at the National Institute of Arthritis and Musculoskeletal and Skin Diseases (February 1995–October 1996) completed a self-report questionnaire adapted from the Yale-Brown Obsessive Compulsive Scale and an in-person psychiatric clinical interview with a psychiatrist or psychiatric clinical nurse specialist. DSM-IV lifetime diagnosis of OCD was determined by clinical interview.

Results: Sixteen subjects (32%) met DSM-IV lifetime diagnostic criteria for OCD and an additional 5 (10%) met criteria for subclinical OCD. Mean ± SD number of symptoms reported on the self-report questionnaire was significantly higher among subjects diagnosed with OCD on clinical interview (40.7 ± 23.2) compared with those without OCD (8.9 ± 11.7; $t = 5.8$, $df = 27$, $p < .001$).

Conclusion: Obsessive-compulsive disorder was 10 to 15 times more common in this cohort of patients with SLE compared with those in community-based studies of OCD. The use of an OCD self-report rating scale proved helpful in the identification of OCD symptoms among patients with SLE. Results suggest that further studies of OCD in patients with SLE are needed and may provide new insight into the pathophysiology of both disorders.

(J Clin Psychiatry 2004;65:301–306)

Received July 30, 2002; accepted July 31, 2003. From the National Institute of Mental Health (Drs. Slattery, Allen, Leonard, and Swedo and Ms. Dubbert), and National Institute of Arthritis and Musculoskeletal and Skin Diseases (Dr. Gourley), National Institutes of Health, Bethesda, Md.

Supported by the National Institutes of Health Intramural Research Program, Bethesda, Md.

The authors thank Stefanie Schwartz, Ph.D., and Cheryl Yarboro, R.N., B.S.P.A., for their help.

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Systemic lupus erythematosus (SLE) is a chronic, relapsing, autoimmune disorder with multisystem involvement.[1] Clinical symptoms may include neuropsychiatric, dermatological, cardiovascular, renal, pulmonary, and gastrointestinal manifestations.[1] Neuropsychiatric symptoms may arise as a direct consequence of SLE pathophysiology or secondary to medical treatments (e.g., steroid psychosis),[2,3] metabolic disturbances,[4] or the psychosocial stress associated with a chronic and potentially lethal disease.[4–6] The prevalence of psychiatric symptoms has been reported to range from 5% to 70% for a variety of symptoms including, among others, depression, mania, anxiety, psychosis, delirium, dementia, and cognitive impairment.[2,5–12] Methodological differences likely contribute to the variability in rates and types of psychiatric symptoms reported.[7,13] Moreover, patients may be reluctant to volunteer information about their psychological distress and may only provide a description of their symptoms when questioned directly.

Obsessive-compulsive disorder (OCD) is typically a chronic, relapsing psychiatric disorder characterized by recurrent intrusive thoughts and/or repetitive behaviors.[14] Once considered rare, OCD is now known to affect approximately 2% to 3% of the population.[15,16] The diagnosis of OCD is commonly hampered by the secretive nature of this disorder. Obsessive-compulsive disorder has been referred to as a disorder of "rational irrationality"[17]; patients recognize the nonsensical nature of their symptoms and are frequently reluctant to disclose their symptoms for fear of shame and embarrassment.[18–20] Patients may choose not to reveal their OCD symptoms, or alternatively, may present to their primary care provider with hidden somatic obsessions or physical symptoms of OCD (e.g., chapped hands from repeated hand-washing or gingival lacerations from excessive tooth-brushing) that may be misdiagnosed as primary medical disorders.[19–22] Finally, comorbid psychiatric disorders such as major depressive disorder, social phobia, and panic disorder occur in as many as two thirds of patients with OCD and may overshadow symptoms of obsessions and compulsions.[23,24]

The current study investigates the rate of OCD among patients with SLE. We hypothesized that the prevalence of

OCD in patients with SLE would be higher than rates reported in community-based studies.[15,16] This hypothesis is based on existing studies that suggest some similarities in the pathophysiology of the 2 disorders, particularly within the basal ganglia of the brain.[11,25–30]

Basal ganglia changes are reported in several structural and functional neuroimaging studies of patients with OCD.[31,32] In addition, OCD is commonly reported in neurologic disorders with known basal ganglia dysfunction.[33–35] For example, up to 70% of children with Sydenham's chorea (SC) are reported to have OCD.[36] The chorea and OCD associated with SC are believed to arise, in part, as a result of antineuronal antibodies that cross-react with neurons in the basal ganglia.[37] These antineuronal antibodies have also been demonstrated in a subgroup of children with primary OCD or tic disorders, suggesting that the antibodies may be involved in the etiopathogenesis of OCD, even in the absence of neurologic abnormalities.[38]

Basal ganglia dysfunction is also reported in patients with SLE. Moreover, evidence suggests an association between basal ganglia abnormalities and neuropsychiatric symptoms in patients with SLE. For example, Miguel et al.[11] examined computed tomography (CT) scans in SLE patients with neuropsychiatric symptoms and found basal ganglia calcifications more frequently among patients with moderate to severe psychiatric symptoms than among patients with mild or no psychiatric symptoms. Lim and colleagues[29] used magnetic resonance spectroscopy (MRS) and demonstrated basal ganglia abnormalities among subjects with major neuropsychiatric symptoms (N = 8), compared with SLE subjects with mild (N = 8) or no (N = 9) psychiatric symptoms and healthy controls (N = 8). Studies using single photon emission computed tomography (SPECT) similarly report functional basal ganglia changes among SLE subjects with major neuropsychiatric symptoms; functional basal ganglia abnormalities were absent among subjects with minor or no neuropsychiatric symptoms.[28,30] Neurologic manifestations of SLE, including chorea and other adventitious movements, are further suggestion of basal ganglia dysfunction, particularly involving the caudate and putamen.[39–41] The etiopathogenesis of basal ganglia dysfunction associated with SLE is unknown. Some studies suggest that neuropsychiatric symptoms and chorea associated with SLE may be related to antineuronal antibodies[42,43] and antiphospholipid antibodies,[44] respectively, although the specific effect, if any, of these antibodies on the basal ganglia is unknown.

The primary aim of this investigation was to assess the rate of OCD among patients with SLE. Previous studies describe elevated rates of a wide range of neuropsychiatric symptoms among patients with SLE[2,5,7–12] but do not specifically report on the prevalence of OCD. Given evidence of basal ganglia dysfunction in these 2 disorders, we expected that the rate of OCD would be higher among patients with SLE compared with rates reported in population-based studies.[15,16]

METHOD

The study was approved by the National Institute of Mental Health Institutional Review Board. Adult patients (N = 105) diagnosed with SLE as defined by American College of Rheumatology criteria[45] and enrolled in outpatient SLE studies at the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS; Bethesda, Md.) were initially contacted by mail and invited to participate in a study investigating psychological symptoms occurring in conjunction with SLE. The mailing included a cover letter describing the nature of the study, a consent form, a self-report questionnaire, and a return envelope. Interested persons completed the materials and returned them by mail to the NIAMS clinic.

Fifty consecutive patients who responded to the mailing were scheduled to see a psychiatrist (A.J.A.) or psychiatric clinical nurse specialist (B.K.D.) who explained the study further and obtained written informed consent. At that visit, the responses to an OCD self-report questionnaire were reviewed with the subject and a semistructured clinical interview was performed to determine whether or not the subject met DSM-IV criteria for lifetime history of OCD.[14] A diagnosis of subclinical OCD was made when obsessions or compulsions were persistently present but did not cause clinically significant distress or impairment.[46,47] Following completion of the clinical interview, the subject's NIAMS medical records were reviewed by investigators (A.J.A., B.K.D.) for documentation of lifetime psychiatric disorders and/or lifetime psychotropic medication use.

The self-report questionnaire used in this study is the 65-item OCD Thoughts and Behaviors Inventory (available upon request from the authors). The inventory is a modification of the clinician-administered Yale-Brown Obsessive Compulsive Scale (Y-BOCS)[48] and was used to identify obsessional thought content (33 items) and compulsive behaviors (32 items). The 65 items on the OCD Thoughts and Behaviors Inventory are scored on a 3-point scale (corresponding to responses of "yes," "no," and "unsure") with a maximum total score of 130. Subjects were asked to report lifetime occurrence of OCD symptoms as described in the OCD Thoughts and Behaviors Inventory; current symptoms were not separately assessed. Psychometric properties of the inventory were not assessed in this pilot investigation, although all responses were confirmed in the clinical interview. Mean scores on the inventory were compared between subjects with OCD (clinical and subclinical) and without OCD to survey the quality and quantity of OCD symptoms reported by patients with SLE. A t test for unequal variances was used to compare the mean scores between the 2 groups.

Table 1. Demographic and Clinical Characteristics of SLE Patients With and Without OCD

Characteristic	With OCD (N = 21)	Without OCD (N = 29)	Total (N = 50)
Age, mean (SD), y	40.4 (10.4)	43.4 (11.3)	42.1 (11.1)
Range	27–68	20–71	20–71
Gender, N (%)			
Female	19 (90)	26 (90)	45 (90)
Male	2 (10)	3 (10)	5 (10)
Race			
White	15 (71)	24 (83)	39 (78)
Black	3 (14)	3 (10)	6 (12)
Asian	2 (10)	2 (7)	4 (8)
Hispanic	1 (5)	0	1 (2)
SLE duration, mean (SD), y	13.1 (7.9)	17.0 (9.3)	15.3 (9.1)
Range	1–33	2–34	1–34
Psychiatric disorders, N (%)[a,b]			
Depression[c]	10 (48)	11 (38)	21 (42)
Psychosis	1 (5)	1 (3)	2 (4)
Eating disorders	0	2 (7)	2 (4)
Anxiety disorder	0	1 (3)	1 (2)
Bipolar disorder	0	1 (3)	1 (2)
Substance abuse	0	1 (3)	1 (2)
Dissociative disorder	0	1 (3)	1 (2)
Psychotropic medications, N (%)[a]			
SSRI	2 (9.5)	3 (10)	5 (10)
TCA	2 (9.5)	3 (10)	5 (10)
Trazodone	1 (5)	0	1 (2)
Benzodiazepines	1 (5)	1 (3)	2 (4)

[a]According to chart review.
[b]All psychiatric diagnoses are nonexclusionary.
[c]Depression was comorbid with all other psychiatric disorders except in 1 patient without OCD who had an eating disorder alone.
Abbreviations: OCD = obsessive-compulsive disorder, SLE = systemic lupus erythematosus, SSRI = selective serotonin reuptake inhibitor, TCA = tricyclic antidepressant.

RESULTS

A summary of the clinical characteristics of the sample is presented in Table 1. Mean age at interview was 42.1 years (SD = 11.1; range, 20–71 years), mean age at the time of SLE diagnosis was 26.8 years (SD = 10.3; range, 7–60 years), and mean duration of SLE illness was 15.3 years (SD = 9.1; range, 1–34 years). Most subjects were white (N = 39 [78%]). That more women (N = 45) than men participated in the study is consistent with previous investigations suggesting a preponderance of SLE in females.[1]

Sixteen of the 50 subjects (32%) met DSM-IV diagnostic criteria for lifetime OCD. An additional 5 subjects (10%) were diagnosed with subclinical OCD. None of the subjects with clinical or subclinical OCD had previously been diagnosed with OCD.

The mean total scores on the OCD Thoughts and Behaviors Inventory were significantly different ($t = 5.8$, $df = 27$, $p < .001$) when subjects with OCD (clinical and subclinical) were compared with those without OCD (Table 2). Mean subscores of obsessions and compulsions were also significantly higher among subjects with OCD compared with those without OCD (Table 2). Obsessive-compulsive symptoms among the subjects with SLE were similar to those observed in clinical studies of patients with primary OCD, i.e., contamination fears and washing and checking compulsions. NIAMS medical records were reviewed for evidence of other psychiatric disorders (Table 1). Twenty-one subjects (42%) were described by chart review as having a history of depression; other psychiatric disorders were described in 8 subjects (16%). Eleven subjects (22%) had been treated with 1 or more psychotropic medications including selective serotonin reuptake inhibitors, tricyclic antidepressants, trazodone, and benzodiazepines (Table 1).

DISCUSSION

Psychiatric symptoms are commonly reported among patients with SLE and are known to contribute to the physical and functional morbidity associated with this chronic medical disorder.[5,10,49,50] This is the first study, to our knowledge, to systematically examine rates of OCD in a clinic sample of patients with SLE and find a 10- to 15-fold increase of OCD over the 2% to 3% prevalence reported in the general population.[15,16] None of the patients had been previously diagnosed with OCD, despite the chronicity and impairment associated with their symptoms. This is in keeping with the well-described secretive nature of this disorder. OCD has been called a "hidden epidemic"[51] as patients may not report their OCD symptoms for fear of shame and embarrassment. For example, one woman in this investigation described cleaning her home for 16 hours a day. When her rheumatologist asked why she had not mentioned her symptoms previously, she replied, "With all of the problems I've got with my lupus, did you think I was going to tell you that all I do is clean my house? You'd think I was nuts!"

Alternatively, patients may present to medical settings seeking treatment for psychiatric disorders other than OCD.[18,19] Nearly one half of the patients in this study reported a history of depression to their medical care providers, yet none had reported their obsessive-compulsive symptoms. These results are similar to those found by Nestadt and colleagues[18] in a community sample of 13 adult subjects with new onset OCD, in which 92% had a lifetime history of seeking mental health care but none had sought care for OCD. Instead, subjects presented with relationship difficulties, stress, alcohol or drug problems, mood disorders, anxiety, and nervousness.[18] Relationship difficulties and stress were not assessed in this study, but the results by Nestadt et al. suggest that some of the psychosocial difficulties reported in studies of SLE[52–56] may be related to underlying difficulties with OCD.

Results of this study support the need for improved efforts to screen for symptoms of OCD among patients with SLE. Several factors related to the patient-physician clinical encounter are important to achieving this goal.

Table 2. OCD Thoughts and Behaviors Inventory Scores for SLE Patients With and Without OCD

	With OCD[a] (N = 21)			Without OCD (N = 29)					
Item	Mean	SD	Range	Mean	SD	Range	t	df	p Value
Obsessions	22.33	13.20	4–49	6.17	8.10	0–30	5.0	31	< .001
Compulsions	18.74	12.26	0–48	2.86	4.62	0–18	5.0	21	< .001
Total	40.71	23.22	14–97	8.89	11.66	0–40	5.8	27	< .001

[a]Subjects with OCD included definite (N = 16) and probable (N = 5) cases.
Abbreviations: OCD = obsessive-compulsive disorder, SLE = systemic lupus erythematosus.

First, clinicians must have an increased awareness of the frequency and clinical manifestations of OCD in medical and psychiatric clinics. Second, characteristics of the patient-physician interview may impact the patient's level of comfort and willingness to disclose his/her symptoms of OCD. Given their concerns about the irrational nature of their obsessive-compulsive symptoms, patients may anticipate a negative response from their physicians if they disclose their symptoms of OCD.[19] This can be overcome by an open, accepting attitude and careful probing for obsessive-compulsive symptoms.

Results of this study also suggest that patient self-report questionnaires may be a clinically important medium for patients to disclose psychological distress, including obsessive and compulsive symptoms. Health-related quality of life self-report measures have proven to be effective in assessing psychological well-being, life satisfaction, coping, and physical symptoms in patients with medical illnesses.[57,58] Health-related quality of life instruments such as the Medical Outcomes Study 36-item Short Form Health Survey (SF-36)[59] have been particularly valuable in demonstrating the impact of psychological distress on disease outcome and treatment satisfaction associated with chronic illnesses,[60,61] including SLE.[51,54,62]

Detection of specific psychiatric symptoms may require the use of illness-specific questionnaires. A recent study by Stoll and colleagues[63] describes the use of a specific measure to identify depressive symptoms in patients with SLE. The OCD Thoughts and Behaviors Inventory was useful in conjunction with the clinical interview in this study to maximize subject report of symptoms given the frequent reluctance of patients to disclose symptoms of OCD. Larger studies are needed to assess the utility of the OCD Thoughts and Behaviors Inventory in comparison with structured clinical interviews and other OCD self-report measures such as the Maudsley Obsessive-Compulsive Inventory or the Leyton Obsessional Inventory.[64] Future studies should also address the clinical course of obsessive-compulsive symptoms in SLE patients, as well as assessing the possible impact of depression on OCD symptom reports.[64]

There are several methodological limitations to the current investigation. The study did not include a control group or a medically ill comparison group; thus, we are unable to determine if the increased rates found in the SLE sample are specific to this medical disorder or are a reflection of increased sensitivity of the OCD Thoughts and Behaviors Inventory. In prior community studies, however, in-person interviews have consistently found rates of OCD in the 2% to 3% range, significantly lower than that demonstrated in the current investigation. Subjects were patients enrolled in research trials for SLE and were self-selected (those responding to the letter), which possibly contributed to a biased subject sample. However, if one considers all of the 105 potential subjects recruited for the study, the 21 cases (20%) of documented OCD would still be markedly increased over the community rates of 2% to 3%. It is not possible to determine from this investigation whether or not OCD symptoms are causally related to SLE or to ascertain from the patients' retrospective reports how the OCD symptoms were related to the onset, severity, or course of SLE. Future studies should include further investigation of the phenomenology of OCD in SLE patients, including whether or not symptoms are episodic as reported in some groups of patients with autoimmune dysfunction.[37,38] This may be of particular interest given evidence of autoimmune abnormalities in patients with SLE,[43] symptom improvement with immunomodulatory treatments,[65] and the natural waxing and waning clinical course of this disorder.[1]

In conclusion, the results of this study clearly support the need for increased awareness and improved identification of OCD symptoms in patients with SLE. The use of self-report questionnaires may be helpful in detecting hidden OCD symptoms among patients with chronic medical illnesses such as SLE.[66,67] When such patients are found, they should be referred for further psychiatric assessment and treatment in order to relieve psychological distress and optimize overall level of function.

Drug name: trazodone (Desyrel and others).

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