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THE PREVALENCE OF OBSESSIVE-COMPULSIVE DISORDER IN LUPUS ERYTHEMATOSUS PATIENTS WITH CENTRAL NERVOUS SYSTEM INVOLVEMENT PRESENTING TO RASSUL-E-AKRAM HOSPITAL, TEHRAN IN 2011

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ABSTRACT

Objective: Lupus erythematosus (LE) is a chronic debilitating and relapsing autoimmune disease which causes psychological problems by involving the central nervous system (CNS). Severe neuropsychiatric manifestations occur in half the patients with different types of LE. The aim of the present study was to evaluate the prevalence of obsessive-compulsive disorder among LE patients presenting to the rheumatologic outpatient clinic and ward at Rassul-e-Akram Hospital, Tehran.

Methods: This was a descriptive study conducted on a statistical population of 170 patients presenting to the rheumatologic outpatient clinic and ward at Rassul-e-Akram Hospital, Tehran. Availability sampling was used and data were collected using two-part questionnaires (part one consisting of demographic data and questions regarding disease history and part two questions about symptoms of obsession and compulsion according to Maudsleycriteriain the fall and winter of 2011. *In order to analyze data, descriptive (relative frequency) and deductive (the t-test and chi-square test) statics were used.*

Result: The mean prevalence of OCD among LE patients was 62.4%. The mean age of patients was 32 with a standard deviation of 9.51. Ninety-four point three percent were female, 44.3% had a high school diploma, 56.6% were unemployed, 60.4% had no prior history of OCD, and 74.2% had LE for less than one year. The most frequent type of medication used by patients with OCD was anxiolytics (42.5%) followed by serotonin reuptake inhibitors (23.6%). Also, depression and anxiety disorders were most common among patients with 32.1% and 37.7%, respectively. The most frequent type of obsession was washing (29%).

Conclusion: In the present study, over half the patients with LE had OCD. Given the high prevalence rates of obsession among LE patients, more research is needed regarding the etiology of OCD in LE patients so that effective measures may be taken regarding prevention and treatment.

Keywords: Lupus erythmatosus, obsession and compulsion

INTRODUCTION

Lupus erythematosis is a chronic and relapsing autoimmune disease which involves various organs in the body. Theclinicalmanifestations may involve the skin, the cardiovascular system, kidneys, lungs, and the gastrointestinal tract (1). The clinical manifestations of LE are relatively different between male and female in that men often develop hypertension, thrombosis, renal problems and hematologic and immunologic complications, whereas women often suffer from malar rash, photosensitivity, oral ulcers, raynaud's phenomenon,

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and arthralgia (2). Diagnoses of the disease in men are often made at higher ages, and end organ damage is seen more frequently than in women with higher mortality rates (2). This disorder is unpredictable and debilitating and by involving the central nervous system causes psychiatric problems for patients. Psychiatric manifestations may occur due to LE pathophysiology or secondary to medications or disease-induced stress (3). Among the different types of LE severe neuropsychiatric symptoms occur in half of the patients (4). This syndrome was initially defined by the American College of Rheumatology in 1999 and encompassed anxiety disorders, cognitive malfunctioning, mood disorders, and psychosis (1). Sluttery et al reported OCD in 32% of LE patients in 2004 (1, 3). This is while the prevalence of LE among the normal population is 2-3% (3).In Iran, Mohammadi et alestimated the prevalence of OCD among those 18 years of age and older to be at 1.8% (5). The likelihood of developing this disorder among adults is similar between male and female, while in adolescents the prevalence is higher among the male gender, with mean development age of 20 years. The presentation of the disease in two-thirds of the cases is at an age below 25 years while only 15% of patients develop symptoms after 35. The disease is more prevalent among blacks than whites and also among singles than married people (6).

OCD is a chronic relapsing psychiatric disorder which is characterized by recurring irresistible thoughts and repetitive behavior. According to DSM IV, the clinical manifestations of OCD include obsessive thoughts or behavior, the irrationality of which the patient is aware of andwhich would interfere, among others,with the patient's social activities (7). Chuan san yo et al reported symptoms of OCD in LE patients in Taiwan in 2007 as recurring suspicions and frequent checking regarding personal belongings which were reduced following medical treatment (1).Other psychiatric disorders such as depression, social phobia and phobic disorders may coexist in two-thirds of the patients which may overshadow the symptoms of OCD (3).

On computerized tomography (CT) scan, LE patients with severe neurologic involvement show more significant basal ganglion calcification than those with mild involvement. As for magnetic resonance imaging (MRI), central nervous system involvement has been reported (8, 9, 10). Recoig, in Norway in 2011, considered autoantibodies (beta-2 glycoprotein antibody) to play a key role in the neurological manifestations of LE (11). Mostafaet al (2010) in Cairo, Egypt reported serum antibody (M1 antiganglioside antibodies) levels as having prognostic value in LE with neurologic involvement, particularly with cognitive dysfunction (12). The pathophysiology of LE with neurological involvement is not clearly known, although autoantibodies and cytokines have been proposed as possible mediators. Better understanding of the underlying psychopathology of the disease and research regarding the better recognition of the symptoms of obsession and patient behavior is of importance in the treatment and care of LE patients (13, 14). Given the fact that there has been no research to date on the prevalence of OCD in LE patients in Iran, we decided to conduct a study on patients with LE at the lupus center in Tehran using the MaudsleyOCD questionnaire. The findings of this study may contribute to the better quality of life in LE patients.

MATERİALS AND METHODS

This was a descriptive study with a statistical population consisting of patients presenting to the rheumatology clinic and ward at Rassul-e-akram Hospital, Tehran. The availability sampling method was used and the sample volume was determined at 323 with a confidence of 95%, a probability error of 0.05, and a probable prevalence of 30%. However, 170 subjects were included in the study due some participants' unwillingness and the lack of enough

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available samples. We selected the LE patients who were willing to participate in the study in cooperation with the rheumatology clinic and ward at Rassul-e-akram Hospital and presented them with two-part questionnaires (1st part: demographic data and questions relating to disease history; 2nd part: questions based on MaudsleyOCD criteria). After completing the questionnaires, participants were divided into two groups of with and without OCD. The Maudsleyquestionnaire consists of 30 correct and incorrect choices which were designed by Rockman and Hudgeson(1997) in order to assess the severity of OCD symptoms. This test, apart from an overall OCD grade, consists of 5 subtests (checking, washing, slowness, suspicion, mental rumination). It is sensitive to the effects of medication. The overall grade including the symptoms of both obsession and compulsion is higher.The cutoff point for this questionnaire is 11 and above, which was raised to 14 for better accuracy in the present study. Furthermore, in a study on students in Sari, Iran in 1385 using the Farsi version of the questionnaire, besides the confirmation of the validity and reliability of the questionnaire for the Iranian population, the cutoff point for OCD was determined as 11 and above (15). This test has frequently been employed in Iran with good validity and reliability (16). The data was analyzed using the SPSS 16 software and descriptive and deductive (the t- and chi-square tests) reasoning.For ethical reasons, informed consent was taken from every subject and personal information was kept confidential.

RESULT

Table 1. The relative frequency of demographic variables and personal characteristics of LE patients with and without OCD

	Demographic variables and clinical characteristics	*With OCD (106 subjects)*	*Without OCD (64 subjects)*	*Results*
Age	Mean	32	2	T=0.109
	Standard deviation	9.51	36.8	P>0.01
Sex	Male	94.3%	92.2%	X^2=0.401
	Female	5.7%	7.8%	P>0.01
Level of Education	No high school diploma	32.1%	35.9%	
	High school diploma	44.3%	34.4%	X^2=0.476
	Bachelor's degree	22.6%	26.6%	P>0.01
	Master's degree and higher	0.9%	3.1%	
Employment Status	Employed	43.4%	43.8%	X^2=0.545
	Unemployed	56.6%	56.3%	P>0.01
OCD History	Positive	39.6%	35.9%	X^2=0.377
	Negative	60.4%	64.1%	P>0.01
Duration of LE Disease	Less than one year	31.8%	19.2%	X^2=0.176
	More than one year	74.2%	44.8%	P>0.01
Drugs in Use	Antidepressives	13.2%	12.5%	
	Anxiolytics	42.5%	42.2%	
	Trazadone	1.9%	3.1%	
	SSRIs*	23.6%	18.8%	
Other Psychiatric Disorders	Essential depression	32.1%	21.9%	
	Anxiety disorders	37.7%	48.4%	
	Bipolar disorders	1.9%	0%	
	Eating disorders	2.8%	1.6%	
	Drug abuse	20.8%	23.4%	

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Table 1 shows information regarding the status of LE patients with and without OCD. Of the 170 individuals participating in the study, the mean prevalence of OCD in LE patients was 62.4%. The mean age of patients with OCD was 32±9.51 years with no significant relationship observed between age and OCD prevalence using the t-test (P>0.01).

Men and women comprised 5.7% and 94.3% of the population under study, respectively. As for the level of education, 32.1% of LE patients had no high school diploma, 43.3% a high school diploma, 22.6% a bachelor's degree, and 0.9% a Master's degree or higher. The employed and unemployed proportions were 43.4% and 56.6%, respectively. The proportion of OCD patients with a history of OCD was 39.6%, while those without a prior history constituted 60.4% of the OCD population. A history of LE for more than one year was found in 74.2% of patients with OCD, whereas those with a year or less-than-one-year history of LE comprised 31.8%. No significant relationship was observed between the qualitative variables (sex, level of education, job, a positive history for OCD, duration of LE) and the prevalence of OCD using the chi-square test (P>0.01).

With regard to the type of medications taken figures were as follows: antidepressives, 13.2%; anxiolytics, 42.5%; trazadone, 1.9%; SSRIs, 23.6%;both antidepressives and anxiolytics, 0.9%; both antidepressives and SSRIs simultaneously, 0.9%. Regarding the prevalence of other psychiatric disorders figures were as follows: depression, 32.1%; anxiety disorders, 37.7%; bipolar disorders, 1.9%; feeding disorders, 2.8%; drug abuse, 20.8%.

The most frequent types of obsession in order of frequency were washing (29%), checking (24.1%), slowness and repeating (23.8%), and suspicion (22.8%) (Figure 1).

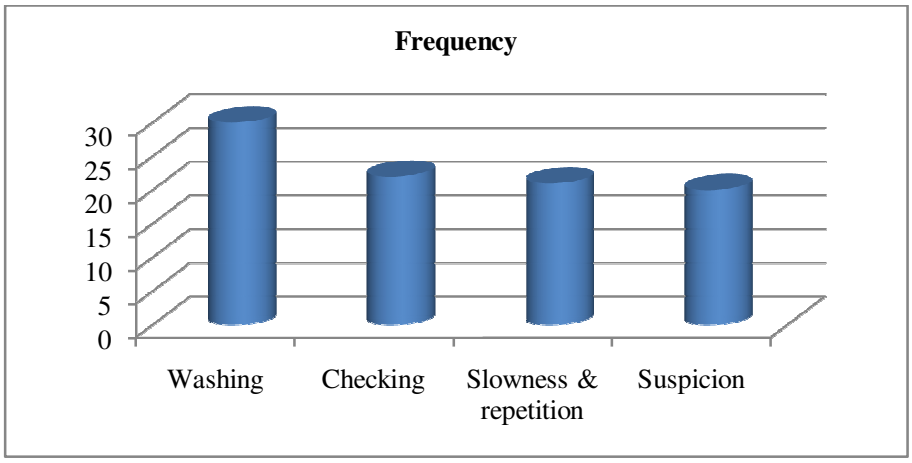

Figure 1. Relative frequency of OCD subtypes among patients with LE

Discussion: The prevalence of OCD in the present study was 64.2%, which was significant. In a similar study, Sluttery et al (2004), using clinical interviews and the Yale-Brown questionnaire, reported a 32% prevalence rate of OCD among LE patients, which was 10 to 15 times higher than the general population prevalence of 2-3% (3). In Iran, Mohammadi et al (2003) reported an estimate of 1.8% for the prevalence of OCD among a population aged 18 years and older using the social avoidance distress scale (SADS) questionnaire. This prevalence rate was 2.8% among women, which was 4 times higher than that of men (0.7%) (5).This difference in Iran may be attributed to the population under study and the materials used for measurement.

In this study, the range of age among patients was 32 with the majority (94.3%) being female. Furthermore, in a study by Rogiv (2007) in India the range of age for OCD among LE

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patients was 25±7.25years, again with the majority being female. He believed that the higher prevalence of the female gender in LE patients with OCD was attributed to genetic factors; he proposed the relative proximity of the OCD gene (11p13) with the gene SLEN3 (11p15) and the estrogen alpha receptor gene (11q12) with the gene SLEH1 (11q14) as a cause and emphasized the role of estrogen in both OCD and LE. Interestingly, he believes that such a pattern of the prevalence of Psychiatric disorders is observedin other disorders with high estrogen levels such as polycystic ovarian syndrome (PCOS)(17).

In this study the majority (60.4%) of patients with OCDhad no prior history of OCD. Sluttery et al (2004) reported no prior history of OCD among their OCD patients (3).

In this study, the prevalence of other psychiatric disorders, determined in the first part of the questionnaire via questions about disease history, in order of frequency was anxiety disorders (37.7%), depression (32.1%), substance abuse (20.8%), eating disorders (2.8%) and bipolar disorders (1.9%).However, in the study by Jerpa et al (2011) on psychiatric disorders and cognitive distress in LE patients 44.6% were reported as having psychiatric disorders with essential depression as the most frequently occurring type (21.7%) (18).Using questionnaires and clinical interviews, Ragiv (2007) reported a prevalence rate of 46% for depression, followed by 21% for adjustment disorders, 13% for phobias, 9% for dysthymic disorders, 7% for anxiety disorders, 2% for bipolar and 1% for substance abuse (17). In a study on 13 adults, Nestad et al (1998) reported that during an acute attack of OCD, 92% of the patients had sought medical treatment for psychiatric disorders other than OCD. Of these 50% had depression, followed by communicative disorders, stress, and substance abuse (19). Yet, the lack of concordance between the results of this study and other findings may be due to the fact that, in the former, questionnaires and clinical interviews were not used to collect data.

Also, in this study, the symptoms of OCD in order of frequency were washing (29%), control and checking (24.1%), slowness and repetition (23.8%), and suspicion (22.8%). These results were in concordance with the findings by Jaisoria et al (2003) in Switzerlandconducted on 3 groups of adolescents, young adults and older with results as follows: washing(26%), mental rumination (26%), slowness and repetition (22%) and suspicion (17%) (20).

The results of this study support the fact that there is a need for the better screening of OCD providers' better understanding of the prevalence rates and clinical manifestations of OCD at health and psychology centers. This can be reinforced by the better physician-patient interview which will help to reveal symptoms and signs of OCD, since many patients with OCD tend to refuse to share their symptoms due to the fear of the physician's or therapist's negative reactions or neglect. This problem may be eliminated with the better acceptance and exploration of the patient's symptoms (21). The identification of the symptoms of every psychiatric disorder requires the application of specific questionnaires tailored to that particular disorder, as Stole et al introduced specific measurement criteria for the diagnosis of depression in LE patients (22). The employment of a mental-behavioral OCD questionnaire in adjunct to clinical interviews contributes to the better reporting of symptoms by OCD patients who might otherwise refuse to cooperate in the expression of their symptoms (23).A drawback of the study was regarding the fact that clinical interviews were not conducted on participants by psychiatrists or clinical psychologists.It is recommended that more studiesbe conducted on the causeofthe incidence of OCD in LE and whether the association is coincidental or not. In addition, it seems necessary for a retrospective study to be done on the pattern of OCD presentation and its association with acute flare-ups of LE and its duration. More studies on the etiology of OCD in LE patients is also recommended so that better measures may be taken in the prevention and treatment of this disorder (24).

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Finally, the results of this study support the need for the better understanding of OCD symptoms and signs in LE patients and recognize the important role of the use of specialized questionnaires and organized clinical interviews in the better detection of OCD symptoms in LE patients and the avoidance of psychological distresstogether with optimum performance (25, 26).

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