Suicidality and Depression in Female Patients with Systemic Lupus Erythematosus

Thesis

Submitted in Partial Fulfillment for Master Degree in
Psychiatry

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2012

ABSTRACT

Objective: To evaluate the presence of suicidal behavior and depressive symptoms and the factors contributing to them in female patients with systemic lupus erythematosus (SLE).

Method: Forty female patients attending the Rheumatology and Rehabilitation department in Kasr Al Aini for treatment of SLE where patients fulfilled the Modified 1997 American College of Rheumatology criteria for the classification of SLE. They were assessed using psychiatric assessment, Rheumatology sheet including SLE Disease Activity Index (SLEDAI) and psychometric tools; Suicide probability scale (SPS) (Arabic version), Patient Health Questionnaire (PHO-9) for assessment of depression, MiniMental State Examination(MMSE) for assessment of cognitive ability and Pain Visual Analogue Scale.

Results: 52.5% of the patients of the sample were depressed, 25% of the sample fulfilled the criteria of major depressive disorder (MDD) according to DSM-IV while the other 27.5% patients were diagnosed as depressive disorder NOS, 90% of the sample had SLE disease activity, 70% of the sample had a suicide probability and 17.5% of the sample had severe suicide probability and 82.5% had a pain score of 5 or more on the pain visual analogue scale.

Suicide probability is related to pain intensity, disfigurement and physical disability but not related to disease activity. SPS and the hostility subscale are predicted by the increased depression (P=0.000) the higher cognitive ability (P=0.028) and the presence of disability/ disfigurement. SLE disease activity is related to depression but not to suicide probability.

Conclusion: Depression and suicide are significant problems in SLE. Pain is a predictor of depression. Younger age with higher cognitive abilities and presence of physical disability/ disfigurement predict suicide. Psychiatric assessment for SLE female patients should be considered as part of their clinical assessment.

Key Words: Systemic lupus erythematosus- depression- suicide.

Acknowledgment

I am honored to present this work under the supervision of Prof. Dr. ***Mona Yehia El Rakhawy****, Professor of psychiatry, Cairo University. Without her guidance, help and advice I could never carry on doing this work.*

I feel very grateful to Prof. ***Dr. Hanan Ahmed Kotb****, Professor of Rheumatology and Rehabilitation, Cairo University. Without her support, guidance and sincere devotion this work couldn't be accomplished.*

I am very proud to have ***Dr. Dalal Abdalla Amer****, Professor of psychiatry, Cairo University, supervising this thesis. Her support and patience were the corner stone for completion of this work.*

I am extremely obliged to Dr. ***Mohammed Abd Al-Fattah Khalil*** *lecturer of psychiatry, Cairo University, for his invaluable help and support and to whom I owe a lot.*

I am very grateful for the patients and their cooperation.

I would like to thank my colleagues in the Rheumatology and Rehabilitation department and my fellow residents in psychiatry department, Cairo University for their efforts and help.

Last but not least, I thank my parents and family for their invaluable care and unlimited support.

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List of Abbreviations

ACR	:	The American College of Rheumatology and Rehabilitation
ACTH	**:**	Adrenocorticotropic hormone
ANA	**:**	Antinuclear antibodies
Anti-NMDAr	**:**	Anti-Nmethyl-D-aspartate receptor antibodies
Anti-P	**:**	Anti-ribonuclear P
APS	**:**	Antiphospholipid syndrome
B2GP1	**:**	β2 glycoprotein 1
BDI	**:**	Beck Depression Inventory
BMD	**:**	Bone mineral density
BPD-I	**:**	Bipolar disorder type I
BPD-II	**:**	Bipolar disorder type II
C3	**:**	Complement component 3
C4	**:**	Complement component 4
CBF	**:**	Cerebral blood flow
CNS	**:**	Central nervous system
CIDI	**:**	Composite International Diagnostic Interview
SLAQ	**:**	Systemic Lupus Activity Questionnaire
CRH	**:**	Corticotrophin-releasing hormone
CRP	**:**	C reactive protein
CSF	**:**	Cerebrospinal fluid
CT	**:**	Computed Topography
dsDNA	**:**	Double Stranded deoxyribonucleic acid
DSM-IV	**:**	Diagnostic and Statistical Manual of Mental Disorders, 4th edition
EBV	**:**	Epstein-Barr virus
ECG	**:**	Electrocardiogram
EEG	**:**	Electroencephalography
ESR	**:**	Erythrocyte sedimentation rate
FSH	**:**	Follicle-stimulating hormone
FT4	**:**	Serum free thyroxin
GAD	**:**	Generalized anxiety disorder
GH	**:**	Growth hormone
GHQ-30	**:**	General health Questionnaire version 30
HPA	**:**	Hypothalamic-Pituitary-Adrenal axis
HPT	**:**	Hypothalamic–pituitary–thyroid axis

IFN-γ	**:**	Interferon- gamma
IgE	**:**	Immunoglobulin E
IGF-1	**:**	Insulin-like growth factor 1
IgG	**:**	Immunoglobulin G
IL	**:**	Interleukin
INR	**:**	International normalized ratio
IUGR	**:**	Intrauterine growth restriction
IV	**:**	Intravenous
LE cells	**:**	lupus erythematosus cells
LHPA	**:**	Limbic-Hypothalamic-Pituitary-Adrenal Axis
MDD	**:**	Major depressive disorder
MMPI-2	**:**	Minnesota Multiphasic Personality Inventory-2
MMSE	**:**	MiniMental State Examination
MRI	**:**	Magnetic Resonance imaging
mRNA	**:**	Messenger RNA
NK	**:**	Natural Killer
NMDA – R	**:**	Anti-*N*-methyl-D -aspartate receptor
NMDA	**:**	N-methyl-D-aspartate
NMO	**:**	Neuromyelitis optica
NPSLE	**:**	Neuropsychiatric manifestations of SLE
PET	**:**	Positron emission tomography
PGE2	**:**	Prostaglandin E2
PHQ_9	**:**	Patient Health Questionnaire -9
PSQI	**:**	Pittsburgh Sleep Quality Index
PTSD	**:**	Posttraumatic stress disorder
PUFAs	**:**	Polyunsaturated fatty acids
QALYs	**:**	Quality-Adjusted Life Years
QoL	**:**	Quality of life
SES	**:**	Socioeconomic status
SF-36	**:**	Short Form health survey
SLE	**:**	Systemic lupus erythematosus
SLEDAI	**:**	Systemic lupus erythematosus Disease Activity Index
sn-RNP	**:**	Sn ribonucleoprotein
SPECT	**:**	Single photon emission computed tomography
SPS	**:**	Suicide Probability Scale
SPSS v 16	**:**	Social science version 16

SSRI	**:**	Selective Serotonin Reuptake Inhibitor
TM	**:**	Transverse myelitis
TNF	**:**	Tumour necrosis factor
TPO	**:**	Thyroid peroxidase
TCSQ	**:**	Trait Coping Style Questionnaire
TRH	**:**	Thyrotrophin releasing hormone
TSH	**:**	Thyrotrophin
WHO	**:**	World Health organization
WMH	**:**	World Mental Health
5-HIAA	**:**	5-Hydroxyindoleacetic acid
5-HT	**:**	Serotonin
5-HT1a	**:**	Serotonin 1a receptor
5-HT2a	**:**	Serotonin 2a receptor
5-HTT	**:**	Serotonin transporter

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INTRODUCTION

Introduction

Systemic lupus erythematosus is a chronic, relapsing autoimmune disorder of connective tissue. SLE is of complex clinical character and generally affects multiple organ systems. The prevailing clinical manifestations including glomerulonephritis, vasculitis, and arthritis occur due to local tissue inflammation caused by the deposition of pathogenic autoantibodies and immunocomplexes in various tissues **(Bachen et al., 2009)**.

SLE is a worldwide disease **(Omdal et al., 1995)**. The global incidence of SLE is reported to be between 4 and 7 in 100,000 per year **(Ishikura et al., 2001)**. This disease is 10–20 times more common in women than in men and the overwhelming majority of SLE patients develop their disease between 15 and 40 years of age **(Bachen et al., 2009)**.

SLE is often associated with a high prevalence of psychiatric disorders and significant psychological suffering .Mood disorders may represent neuropsychiatric manifestations of SLE (NPSLE) disease activity or may be a consequence of the stress of having a chronic major disease **(Hay et al., 1992)**.

Major depression is one of the most frequent psychiatric disorders observed in patients with SLE, with point prevalence rates between 10.8% and 39.6% which is much higher than in the general population (**Purandare et al., 1999)**.

Chronic physical illness is an important risk factor for suicide. SLE is one with a risk quoted to be fivefold higher than expected. Many factors may contribute to this occurrence: pathophysiological changes in the brain resulting from the underlying disease (NPSLE), depression related to the variable course and the unpredictable nature of the disease, and corticosteroids may rarely induce mental disturbance **(Ghosh and Victor, 1999)**.

Suicide and suicide attempts, although well recognized in patients with SLE, have been commented on relatively little. Greater awareness of the risk of suicide in patients with psychiatric manifestations of SLE may help to reduce the incidence of this potentially fatal phenomenon **(Karassa et al., 2003)**.

AIM OF THE WORK

The aim of the work is evaluating the presence of suicidal behavior, depressive symptoms and the factors contributing to them in female patients with systemic lupus erythematosus.

HYPOTHESIS

Depression is commonly found in SLE female patients. Depression is related to disease activity, disease complications as physical disability, disfigurement and fetal loss as well as psychosocial burden of the disease.

Suicidality in SLE female patients is uncommon and is related to depression encountered in the patients in addition to disease activity.

CHAPTER I

Systemic Lupus Erythematosus

Introduction

Systemic lupus erythematosus is a multisystem autoimmune disorder with a broad spectrum of clinical presentations **(Valesini et al., 2006)**.

There is a peak age of onset among young women between the late teens and early 40s, and a female to male ratio of 9:1, especially in women in child-bearing years; aged 15 to 35, and is also more common in those of non-European descent **(Rahman and Isenberg, 2008)**.

SLE is a chronic illness that may be life threatening when major organs are affected but, more commonly, results in chronic debilitating ill health.

I. Epidemiology

I.1 Incidence

The incidence of SLE in the general population varies according to the characteristics of the population studied (i.e., age, gender, race, ethnic/national origin or period of time studied), but also depending on changes in classification criteria.

The current estimated prevalence of SLE ranges from 6 to 150 per 100 000, and depends on sex and racial origin. There is a 5–10 times