

Prevalence of Depression State among Systemic Lupus Erythematosus Patients in Bali Rheumatic Autoimmune Community

I Ketut Sumarda¹, Ni Ketut Putri Ariani², Ni Ketut Sri Diniari³, I Wayan Gede Artawan Eka Putra⁴, Cokorda Bagus Jaya Lesmana⁵, Luh Nyoman Alit Aryani⁶, I.A. Kusuma Wardani⁷

^{1,2,3,4,5,6,7}Psychiatry Study Program, Faculty of Medicine, Udayana University, Denpasar.

Abstract

Background: Systemic lupus erythematosus (SLE) is a chronic autoimmune inflammatory disease of unknown cause, with one of the clinical manifestations is depression. The incidence of depression in SLE is quite high and most of them are undiagnosed due to subclinical presentation or do not appear in routine SLE examinations, so it is a challenge for clinicians to recognize the diagnostic criteria, signs and symptoms of depression in SLE and appropriate treatment.

Aim: To determine prevalence of depression in SLE patients.

Methods: This study used a cross-sectional design involving 81 SLE patients at Bali Autoimmune Rheumatic Community in March 2021. The assessment of the level of depression was carried out using the Beck Depression Inventory (BDI) questionnaire.

Results: The mean age in this study sample was 37.4 years with an average length of illness with SLE 6.1 years. Most of the samples were female (98.8%). Most of the respondents have a bachelor's degree (56.8%) and most of the respondents have occupation as civil servants/private/TNI/Polri (49.3%). Marital status is mostly married (69.1%). The prevalence of depression found was 38.2%, which was divided into mild depression 8.6%, moderate depression 24.7% and major depression 4.9%.

Keywords: Systemic Lupus Erythematosus, Autoimmune, Depression, Prevalence.

INTRODUCTION

Systemic lupus erythematosus (SLE) is a chronic autoimmune inflammatory disease whose cause is still unclear, has a broad clinical picture and a diverse course of the disease, the most common manifestations of which are arthritis, skin lesions, kidney disease, and neuropsychiatric symptoms. Based on data from the Indonesian Lupus Foundation, the number of Lupus sufferers in Indonesia continues to increase, in 2010, there were 10,314 sufferers, and in 2012 it had reached 1.5 million sufferers.¹

The consequences of Lupus in hospitalized patients have also increased significantly compared to 2014.2 Neuropsychiatric systemic lupus erythematosus (NPSLE) is a neuropsychiatric syndrome associated with SLE disease. NPSLE causes clinical manifestations in the form of various central and peripheral nervous system disorders including depression.

Address for correspondence: I Ketut Sumarda
Psychiatry Study Program, Faculty of Medicine, Udayana University, Denpasar.

Access this article online

Quick Response Code:



Website:
www.pnrjournal.com

DOI:
10.47750/pnr.2022.13.04.208

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: pnrjournal@gmail.com

How to cite this article: I Ketut Sumarda, Ni Ketut Putri Ariani, Ni Ketut Sri Diniari, I Wayan Gede Artawan Eka Putra, Cokorda Bagus Jaya Lesmana, Luh Nyoman Alit Aryani, I.A. Kusuma Wardani, Prevalence of Depression State among Systemic Lupus Erythematosus Patients in Bali Rheumatic Autoimmune Community, J PHARM NEGATIVE RESULTS 2022;13: 1480-1482.

Several studies have reported a prevalence rate of depression in Lupus patients around 11-65.8%, while the lifetime prevalence of depression in SLE is reported to be 69%.^{3,4} SLE routine examination is a challenge for clinicians to recognize the diagnostic criteria, signs, and symptoms of depression in SLE, and appropriate treatment.

Depression is a form of mood disorder characterized by moodiness, lethargy, feelings of uselessness, no passion for life, and hopelessness. The prevalence rate of depression is very high, around 35 million people in the world have experienced depression during their lifetime and 17% come to the doctor's office with somatic complaints. A survey conducted by World Mental Health in 17 countries found that 1 in 20 people had experienced a previous episode of depression. Data in Indonesia found that 11.6% of the adult population, which is around 1,740,000 people, experience depression, and this figure will continue to increase along with increasing psychosocial pressure, chronic illness, diverse lives and increasing age. ² Basic Health Research 2018 states the prevalence of mental-emotional disorders in people aged 15 years and over in Indonesia is 6.1%. The mental-emotional disorders are mainly anxiety and depression and only 9% of people with depression are undergoing medical treatment. In 2013 around 3.4 million adolescents aged 10-19 experienced mental disorders, with depression being the most common disorder. ⁵ Thus, this study was designed to determine the prevalence of depression in SLE patients.

METHOD

This research is a descriptive study with a cross-sectional design. The study population was members of the Bali Autoimmune Rheumatic Community in the period March 2021. The inclusion criteria were SLE sufferers aged 18-60 years who became members of the Bali Autoimmune Rheumatic Community in 2021. Exclusion criteria were refusing to participate in the study after informed consent, SLE sufferers who could not read and write, have visual impairments (blindness), experience severe mental disorders and severe cognitive impairments, do not complete the questionnaire completely and provide extreme data. The number of samples needed after the calculation is 81 people. The sample selection was carried out by consecutive sampling. The measurement tool used to assess depression is the Beck Depression Inventory-II (BDI-II). This measuring instrument consists of 21 statements and is the most widely used depression level assessment tool. Respondents who agreed to take part in the study signed an informed consent and were then asked to answer the questions in full on the questionnaire provided with guidance from the researcher. The data that has been collected is then processed manually and analysed descriptively, then displayed in tabular form.

RESULTS

Table 1 shows the average age of the sample in this study was 37.4 years with an average SLE illness of 6.1 years. Most of the samples were female, 80 people (98.8%), and only 1 male (1.2%). Based on the research conducted, most of the respondents had undergraduate education, 46 people (56.8%) and Academy/Diploma, 18 people (22.2%). Most of the respondents had jobs, 40 people (49.3%) were PNS/Private/TNI/Polri, and 22 people (27.2%) were housewives, only 5 people (6.2%) did not work. Most of the marital status is married 56 people (69.1%), unmarried 24 people (29.6%) and 1 person (1.2%) widow.

Table 1. Characteristics of Research Subjects

Characteristics	n=81	Percentage (%)
Age (years old) (Mean ± SD)	37,4	
Duration of SLE (years old) (Mean ± SD)	±10,2 6,1 ± 5,1	
Sex		
Male	1	1,2
Female	80	98,8
Educational Background		
No formal education	3	3,7
Junior high school	2	2,5
Senior high school	12	14,8
Academy/ Diploma	18	22,2
Bachelor Degree	46	56,8
Occupation		
Barista	1	1,2
Teacher	1	1,2
Merchant	3	3,7
Civil servant/ private-sector/ army/ police	40 3	49,3 3,7
Entrepreneur	1	1,2
Pensiunan		
Housewife	22	27,2
Student	5	6,2
Not working	5	6,2
Marital status		
Not yet married	24	29,6
Married	56	69,1
Widowed	1	1,2

Table 2 describes the level of depression in SLE patients in the Bali Autoimmune Rheumatism Community, namely 38.2%, which is divided into 8.6% mild depression, 24.7% moderate depression and 4.9% severe depression.

Table 2. Depression prevalence

Variable	n (%) (n = 81)
Depression state	
Not depressed	50 (61,7)
Mild	7(8,6)
Moderate	20(24,7)
Severe	4(4,9)

DISCUSSION

Epidemiological studies of SLE show a much higher frequency of the disease in women than men. The female to male incidence ratio varies with age, being 1:1 in the first decade of life, followed by a sharp increase to 9:1 in the fourth decade, then decreasing and increasing again in the seventh to eighth decades. Overall, the female to male ratio is 7-15:1 in adults and 3-5:1 in children. Men have a peak of disease attacks at a later age (fifth to seventh decades)6. While women in the third to fifth decades. Women most likely get SLE due to interaction between hormone, genetic, epigenetic and gut microbe. X chromosome was identified to be associated with an increased risk of SLE and changes in microRNA expression that occur through estrogen-mediated mechanisms.7

The prevalence of depression in SLE patients in the Bali Autoimmune Rheumatic Community is 38.2%, which is divided into 8.6% mild depression, 24.7% moderate depression and 4.9% severe depression. Subjects are more sensitive to stress thereby increasing susceptibility to depression. Individuals with SLE report more daily problems, tend to react with high emotions and show stronger reactions to recurring problems; this may lead to a greater tendency to experience depression and anxiety. 8 The increased production of pro-inflammatory cytokines (IFN- γ , IL-5, and IL-12) in SLE is implicated in the development of depression. 9

CONCLUSION

The prevalence of depression in SLE patients in the Bali Autoimmune Rheumatic Community is 38.2%, which is divided into 8.6% mild depression, 24.7% moderate depression and 4.9% severe depression. Therefore, it is necessary to screen depression in all SLE patients from the time they are first diagnosed and if there are symptoms of depression to consult a psychiatrist immediately to reduce the risk of developing more severe depression.

REFERENCES

1. Prasetyo AR, Kustanti ER. Bertahan Dengan Lupus: Gambaran Resiliensi Pada Odapus. *Jurnal Psikologi Undip*. 2014; 13: 139-148.
2. Pusat Data dan Informasi Kementerian Kesehatan RI. *Situasi Lupus di Indonesia*. Jakarta. 2017.
3. Evan E et al. Depression in systemic lupus erythematosus, dependent on or independent of severity of disease. *Lupus*. 2013; 13(9): 1462-1469.
4. Gupta M. Depression in systemic lupus erythematosus: a systematic review. *International Journal of Students Research*. 2015; 5(2): 21-27.
5. Fourianalistyawati E, Listiyandini RA. Hubungan Antara Mindfulness Dengan Depresi Pada Remaja. *Jurnal Psikogenesis*, 2017; 5: 115-122.
6. Gergianaki I, Bortoluzzi A, Bertias G. Update on the epidemiology, risk factors, and disease outcomes of systemic lupus erythematosus. *Best Practice & Research Clinical Rheumatology*. 2018; 30: 1-18.

7. Nusbaum JS et al. Sex Differences in Systemic Lupus Erythematosus: Epidemiology, Clinical Considerations, and Disease Pathogenesis. *Mayo Clinic Proceedings*. 2020; 95(2): 384-394.
8. Pereira-Morales AJ, Adan A, Forero DA. Perceived Stress as a Mediator of the Relationship between Neuroticism and Depression and Anxiety Symptoms. *Curr Psychol.*, 2017: 1-9.
9. Schmidt FM et al. Serum Marker of Inflammation Mediate the Positive Association Between Neuroticism and Depression. *Frontier in Psychiatry.*, 2018; 9: 1.