

IR – PERPUSTAKAAN UNIVERSITAS AIRLANGGA

THESIS

COVID-19 IN AUTOIMMUNE RHEUMATIC DISEASES: PATIENTS

PROFILE AT DR. SOETOMO HOSPITAL IN 2020-2022



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MEDICAL STUDY PROGRAM

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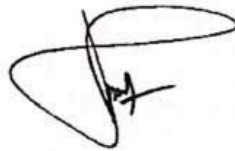
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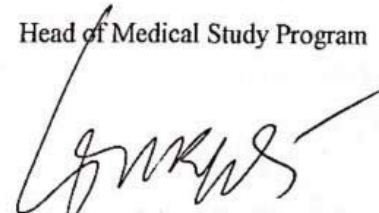
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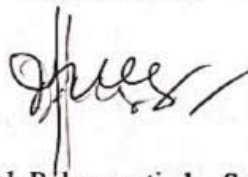
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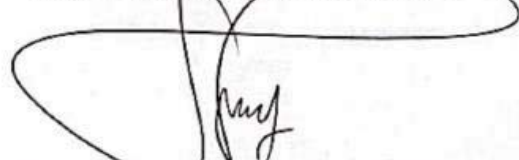
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Surabaya, 18th August 2022

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SUMMARY

COVID-19 caused by the SARS-CoV 2 virus has been declared as a pandemic by the WHO since the early of 2020. COVID-19 may have various manifestations, ranging from asymptomatic to life-threatening conditions. In a pandemic situation, patients with autoimmune rheumatic diseases are individuals who are included in the population at risk. People with the immune-mediated disease are susceptible to this viral infection. In addition, studies reported that COVID-19 and autoimmune rheumatic diseases have similarities in clinical findings and immune response.

The purpose of this study is knowing the profile of patients with pre-existing autoimmune rheumatic disease suffering from COVID-19 at Dr. Soetomo Hospital in 2020- 2022. With more specific purposes as follows; to know the proportion of COVID-19 patients with ARD, including their severity classification and clinical outcome; to know the consumption of DMARDs or immunosuppressants of ARD patients during SARS-CoV-2 infection; to know the number of ARD in post-covid infection; and to know the acceptance of COVID-19 vaccination among patients with ARD. The result of this survey is expected to become basic data for further study.

An observational cross-sectional study using medical records in ARD patients was carried out in the rheumatology outpatient clinic at Dr. Soetomo Hospital, Surabaya from 2020-2022 is conducted to collect the data. The sample in this study were patients with autoimmune rheumatic disease who diagnosed with COVID-19 taken by total sampling, a technique of taking all samples that meet the inclusion and exclusion criteria.

About a quarter of the participants (24,5%) have been infected with COVID-19. Characteristics of patients ARD infected with COVID-19 were female (93,9%), had a mean age of $43 \pm 14,3$ years with the most common diagnosis is spondyloarthritis

(44,9%) and methylprednisolone (65,3%) as the most consumed current medication. Hypertension (24,5%) is still being the highest comorbidity. Most of the cases were confirmed by RT-PCR testing (71,4%). The source of COVID-19 exposure was highly suspected within the family (44,9%). In 2021, it has been recorded as the year with the greatest cases. Predominantly, patients had a mild clinical condition (51%) which management taken was self-isolation (69,4%). Many patients who consumed the medication to treat their ARD chose to continue the medication during COVID-19 infection (57,1%). However there are 14 of 49 cases (28,6%) which diagnosed of ARD in post-covid infection. Most of the ARD patients (54,5%) have already received the COVID-19 vaccine, be it incomplete, fully-vaccinated, or booster. For suggestions, conduct a multi-center study to increase the sample size and conduct an analysis study to see the strenght of the relationship between variables.

ABSTRACT

Background: Coronavirus Disease 2019 (COVID-19) was declared as a pandemic since it rapidly became worldwide spread. COVID-19 has various manifestations, ranging from asymptomatic to life-threatening conditions. During the pandemic, patients with autoimmune rheumatic diseases (ARD) are individuals who are included in the population at risk. In addition, the use of immunomodulatory and/or immunosuppressive agents are considered to increase the susceptibility to the infection. Studies reported that COVID-19 and ARD have similarities in clinical findings and immune response. The aim of this study is to know the profile of patients with ARD infected with COVID-19 at Dr. Soetomo Hospital in 2020 – 2022.

Methods: An observational cross-sectional study using medical records in ARD patients was carried out in the rheumatology outpatient clinic at Dr. Soetomo Hospital, Surabaya.

Results: The total population in this study was 200 patients. 49 of 200 (24.5%) had been infected with COVID-19. This study had female predominance (93.9%) and a mean age of 43 ± 14.3 years. The most common primary ARD diagnoses were undifferentiated spondyloarthritis (SpA), systemic lupus erythematosus (SLE), rheumatoid arthritis (RA), psoriatic arthritis, accounting for 44.9%, 32.7%, 16.3%, and 4.1% respectively. Methylprednisolone was taken by 65.3% of the sample. Despite the infection, 57.1% of ARD patients chose to continue their ARD medication. 63.2% of ARD patients had asymptomatic-mild COVID-19 conditions and the rest of them had moderate-severe COVID-19 conditions. There were 14 cases (28.6%) that were developing ARD post-covid infection.

Conclusion: The proportion of COVID-19 among ARD patients was 24,5%.

Keywords: Autoimmune rheumatic disease, COVID-19, Surabaya, proportion, DMARDs, human & health

TABLE OF CONTENT**THESIS**

COVID-19 IN AUTOIMMUNE RHEUMATIC DISEASES: PATIENTS PROFILE AT DR. SOETOMO HOSPITAL IN 2020-2022	i
THESIS	ii
APPROVAL SHEET	iii
EXAMINER'S DECISION SHEET	iv
ORIGINALITY DECLARATION	v
ACKNOWLEDGEMENTS	vi
SUMMARY	viii
ABSTRACT	x
TABLE OF CONTENT	xi
TABLE OF DATA	xiv
TABLE OF FIGURE	xv
INDEX	xvi

CHAPTER I

INTRODUCTION	1
1.1 Background	1
1.2 Formulation of The Problems	3
1.3 Research Purposes	3
1.3.1 General Purpose	3
1.3.2 Special Purpose	3
1.4 Benefits of Research	4
1.4.1 Academic Benefit	4
1.4.2 Practical Benefit	4

CHAPTER II

LITERATURE REVIEW	5
2.1 Autoimmune Rheumatic Disease	5
2.1.1 Systemic Lupus Erythematosus (SLE)	5
2.1.2 Rheumatoid Arthritis (RA)	12
2.1.3 Sjögren Syndrome	16
2.1.4 Scleroderma	22
2.1.5 Spondyloarthopathy (SpA)	25
2.1.6 Idiopathic Inflammatory Myopathies (IIMs)	27
2.1.7 Treatment for Autoimmune Rheumatic Disease	29
2.2 COVID-19 Autoimmune	32
2.2.1 Epidemiology	32
2.2.2 Pathophysiology and Clinical Features	33

2.2.3	Diagnosis and Assessment of Severity	34
2.3	Autoimmune Rheumatic Disease and COVID-19.....	36
2.3.1	Risk of Patients with Autoimmune Disease during The COVID-19 Pandemic	36
2.3.2	Similarities in Immune Response	38
2.3.3	Autoantibodies in Patient with COVID-19.....	39
2.3.4	Effect of Autoimmune Rheumatic Disease Treatment in COVID-19 Clinical Course.....	40
2.3.5	Guideline Treatment COVID-19 in Autoimmune Rheumatic Disease Patients	41
2.3.6	Laboratory Parameter for Autoimmune Rheumatic Disease Patients Diagnosed with COVID-19	41
CHAPTER III		
THE CONCEPTUAL FRAMEWORK OF RESEARCH.....		43
3.1	Conceptual Framework.....	43
3.2	Conceptual Framework Explanation	43
CHAPTER IV		
RESEARCH METHOD		45
4.1	Research Type and Design	45
4.1.1	Research Type	45
4.1.2	Research Design	45
4.2	Population and Sample.....	45
4.2.1	Research Population	45
4.2.2	Research Sample	45
4.2.3	Sample Size	46
4.2.4	Sampling Technique	46
4.3	Research Variables and Operational Definitions.....	46
4.3.1	Research Variables	46
4.3.2	Operational Definition.....	46
4.4	Research Instrument	49
4.5	Research Location and Time	49
4.5.1	Research Location.....	49
4.5.2	Research Time	49
4.6	Data Collection Procedure	49
4.7	Research Operational Framework.....	50
4.8	Data Processing and Analysis Techniques.....	51
4.8.1	Data Processing Techniques.....	51
4.8.2	Data Analysis Techniques	51
4.9	Research Ethics	51
4.9.1	Approval form The Health Research Ethics Committee of Dr. Soetomo Hospital	52

4.9.2	Anonymous	52
4.9.3	Confidentiality	52
CHAPTER V		
RESULT & ANALYSIS		53
5.1	Result and Analysis	53
5.1.1	Profile ARD patients who has been infected with COVID-19	53
5.1.2	COVID-19 infection history of ARD patients	54
5.1.3	The consumption of DMARDs or immunosuppressants of ARD patients during SARS-CoV-2 infection	55
5.1.4	ARD in post-covid infection	56
5.1.5	COVID-19 vaccination among patients with ARD	57
CHAPTER VI		
DISCUSSION		59
CHAPTER VII		
CLOSING		64
7.1	Conclusion	64
7.2	Suggestion	64
BIBLIOGRAPHY		65
ATTACHMENT 1		
RESEARCH SCHEDULE		77
ATTACHMENT 2		
LETTER OF EXEMPTION		78

TABLE OF DATA

Table 2. 1 SLEDAI (Systemic Lupus Erythematosus Disease Activity Index, Bombardier et al, 1992)	9
Table 2. 2 The 2010 ACR-EULAR Classification Criteria for Rheumatoid Arthritis	14
Table 2. 3 ACR-EULAR 2016 Classification Criteria for Sjögren's	17
Table 2. 4 The EULAR Sjogren's Syndrome Disease Activity Index (ESSDAI): Domain and Item Definitions and Weights	18
Table 2. 5 Comparison of Localized Scleroderma and Systemic Sclerosis	23
Table 2. 6 Bohan and Peter Criteria for The Diagnosis of Polymyositis and Dermatomyositis	28
Table 2. 7 Criteria for assessing the severity of COVID-19	35
Table 5. 1 Demographic data.....	51
Table 5. 2 Diagnosis of autoimmune rheumatic disease.....	51
Table 5. 3 Current medication of autoimmune rheumatic disease.....	51
Table 5. 4 Comorbidity history	52
Table 5. 5 Comorbidities.....	52
Table 5. 6 COVID-19 history	53
Table 5. 7 Characteristic of ARD patients suffering from COVID-19.....	52
Table 5. 8 COVID-19 infection history	54
Table 5. 9 Vaccination history	53
Table 5. 10 Patients vaccinated data	54
Table 5. 11 Patients unvaccinated data	54

TABLE OF FIGURE

Figure 2. 1 2019 EULAR Classification Criteria for SLE.....	8
Figure 2. 2 ACR DAS 28 Disease Activity Score	16
Figure 2. 3 ACR-EULAR Classification Criteria for Systemic Sclerosis	24
Figure 2. 4 European Scleroderma Study Group (EScSG) activity index of Systemic Sclerosis	24
Figure 2. 5 ASAS Classification Criteria for Axial Spondyloarthritis (SpA).....	26
Figure 2. 6 ASAS Classification Criteria for Peripheral Spondyloarthritis (SpA).....	26
Figure 2. 7 Ankylosing Spondylitis Disease Activity Score (ASDAS) Calculator	27
Figure 2. 8 Cutaneous Dermatomyositis Disease Area and Severity Index (CDASI).	29
Figure 2. 9 Simplified AndroCoV Clinical COVID-19 diagnosis to be employed for screening in the general population	34
Figure 2. 10 CDC Antigen Test Algorithm for Community Settings.....	35
Figure 2. 11 The Development of Autoimmune-Associated Hypertension	37
Figure 2. 12 Similar Immune Reactions in SARS-CoV-2 Infections and Autoimmune Diseases.....	39
Figure 2. 13 ACR Guidance for the treatment of rheumatic disease following known SARS -CoV-2 exposure and in the context of active presumptive COVID- 19.....	41
Figure 3. 1 Conceptual Framework.....	43
Figure 4. 1 The Research Line.....	50

INDEX

ACE 2	: Angiotensin-converting enzyme 2
ACR	: American College of Rheumatology
ARD	: Autoimmune Rheumatic Disease
ASD	: Autoimmune Systemic Disease BMI: Body Mass Index
COVID-19	: Coronavirus Disease 2019
DMARDs	: Disease Modifying Anti Rheumatic Drugs
EULAR	: European League Against Rheumatism
IIMs	: Idiopathic Inflammatory Myopathies
NLR	: Neutrophil Lymphocyte Ratio
NSAIDs	: Non Steroidal Anti-Inflammatory Drugs
RA	: Rheumatoid Arthritis
SARS-CoV 2	: Severe Acute Respiratory Syndrome coronavirus
SLE	: Systemic Lupus Erythematosus
SpA	: Spondyloarthropathy
SSc	: Systemic Sclerosis
WHO	: World Health Organization