Artikel Penelitian

The Profile of COVID-19 Patients in Semen Padang Hospital Indonesia

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Abstract

The rapid increase in the number of Coronavirus Disease 2019 (COVID-19) cases, including in Padang, has led the government to designate several hospitals as referrals for COVID-19 patients. The profile of COVID-19 patients is needed to describe the pattern of this disease in Padang. ***Objectives:*** *To revealed the profile of COVID-19 patients in SPH, Indonesia.* ***Methods:*** *This was a retrospective study. This study was conducted and collected data of COVID-19 patients from March to June 2020.* ***Results:*** *There are 54 patients with mean age of 50.93 (14.6) years old, 43% male and 57% female. The clinical manifestations are cough (74%), fever (37%), sore throat (22%), and fatigue (35%). There are 82% of patients admitted that they have contacted with other COVID-19 patients or have activities in COVID-19 cluster area, and only 7% have traveled to other cities. The mean length of stay is 31.91 (14.87) days. The mean laboratory data: Hemoglobin 13.7 (1.39) gr/dl, WBC 8,037.04 (2,846.27) /mm^3, platelet 274,389 (75,053.80) /mm^3, and NLR 3.16 (3.37). Chest radiograph results are bronchopneumonia (22.22%), cardiomegaly (7.41%), and normal (70.37%).* ***Conclusion:*** *The profile of COVID-19 patients in SPH is more in female patients, cough is the most clinical manifestation that appeared, the mean laboratory data (hemoglobin, WBC, and platelet) are normal, and normal chest radiography is the most chest radiograph results in these patients.*

Kata kunci*: COVID-19, Padang, profile*

Abstrak

Peningkatan kasus Coronavirus Disease 2019 (COVID-19) yang cepat, termasuk di Padang, mendorong pemerintah mempersiapkan beberapa rumah sakit untuk menjadi rujukan pasien COVID-19. Profil pasien COVID-19 penting untuk menjelaskan gambaran penyakit ini di Padang. **Tujuan:** Mendapatkan profil pasien COVID-19 di Semen Padang Hospital (SPH). **Metode:** Penelitian ini merupakan studi retrospektif pada pasien COVID-19 dari Maret hingga Juni 2020. **Hasil:** Terdapat 54 pasien dengan rerata umur 50.93 (14.6) tahun, 43% pria dan 57% wanita. Manifestasi klinis adalah batuk (74%), demam (37%), nyeri tenggorokan (22%), dan lelah (35%). Terdapat 82% pasien yang kontak dengan pasien COVID-19 lain atau memiliki riwayat aktivitas di daerah klaster COVID-19, dan hanya 7% yang memiliki riwayat bepergian ke luar kota. Rerata lama rawatan adalah 31.91 (14.87) hari. Rerata hasil laboratorium: Hemoglobin 13.7 (1.39) gr/dl, leukosit 8,037.04 (2,846.27) /mm^3, trombosit 274,389 (75,053.80) /mm^3, dan NLR 3.16 (3.37). Hasil pemeriksaan radiologi thoraks adalah bronkopneumonia (22.22%), kardiomegali (7.41%), dan normal (70.37%). **Simpulan:** Profil pasien COVID-19 di SPH adalah lebih banyak wanita, batuk merupakan manifestasi klinis yang terbanyak, rerata hasil laboratorium (hemoglobin, leukosit, dan trombosit) normal, dan gambaran radiologi thoraks yang terbanyak adalah normal.

Keywords*:* COVID-19, Padang, profile

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INTRODUCTION

Coronavirus Disease 2019 (COVID-19) cases have started to be reported in Indonesia since March 2020.[1,2] COVID-19 has also spread to almost all countries in the world. In March 2020, the World

Health Organization (WHO) declared COVID-19 a pandemic.[3]

The rapid increase in the number of cases, including in Padang, has led the government to designate several hospitals as referrals for COVID-19 patients. One such hospital is Semen Padang Hospital (SPH). This hospital treats mild and moderate COVID-19 patients. The profile of COVID-19 patients is needed to describe the pattern of this disease in Padang. The aim of this study was to reveal the profile of COVID-19 patients in SPH, Indonesia.

METHODS

This was a retrospective study conducted in SPH, Padang, West Sumatera, Indonesia. This study was conducted and collected data of COVID-19 patients from March 2020 to June 2020. This study involved all COVID-19 patients more than 18 years old. All blood samples and chest radiographs from this study participants were routine-test when patients were admitted to the hospital.

Categorical scale data was written in frequencies and percentages, while interval data or ratio scale was written in mean (standard deviation). All data is collected and tabulated then statistical analysis is computerized.

RESULTS

There are 54 patients with mean age of 50.93 (14.6) years old, 43% male and 57% female. The clinical manifestations are cough (74%), fever (37%), sore throat (22%), and fatigue (35%). There are 82% of patients admitted that they have contacted with other COVID-19 patients or have activities in COVID-19 cluster area, and only 7% have traveled to other cities. The mean length of stay is 31.91 (14.87) days.

The mean laboratory data: Hemoglobin 13.7 (1.39) gr/dl, white blood cells (WBC) 8,037.04 (2,846.27) /mm3, platelet 274,389 (75,053.80) /mm3, and neutrophil to lymphocyte ratio (NLR) 3.16 (3.37). Chest radiograph results are bronchopneumonia (22,22%), cardiomegaly (7.41%), and normal (70.37%). Research's subjects characteristics can be seen in Table 1.

Table 1. Baseline characteristics

Characteristics (n=54)	Mean (SD)	n (%)
Average Age (yo)	50.93 (14.6)	
Sex		
Male		23 (43)
Female		31 (57)
Clinical Manifestation		
Cough		40 (74)
Fever		20 (37)
Fatigue		19 (35)
Sore throat		12 (22)
Length of Stay (days)	31.91 (14.87)	
Laboratory Findings		
Hb (gr/dl)	13.7 (1.39)	
WBC (/mm^3)	8,037.04 (2,846.27)	
Platelet (/mm^3)	274,389 (75,053.80)	
NLR	3.16 (3.37)	
Radiology Findings		
Broncho-pneumonia		12 (22.22)
Cardiomegaly		4 (7.41)
Normal		38 (70.37)
Comorbidites		
Hypertension		15 (28)
Diabetes mellitus		7 (13)
Dyspepsia		11 (20)

DISCUSSION

The mean age of COVID-19 patients in this study was 50.93 (14.6) years. Pericas et al (2020) reported that the characteristics of COVID-19 patients in China were the most in the age group 30-79 years. The mean age ranges from 47 - 56 years.[4] Dawood et al (2020) added that most cases were in the age group over 50 years.[5] This is supported by Bulut and Kato (2020), who reported that the largest age group in Spain and Canada is the 50 - 59 year-old group (18.8% and 19%).[6] Bi et al (2020) found that the largest age group was in the 30 - 39 years and 60 - 69 years age group (22%).[7] In Indonesia, according to Sutaryono et al (2020) the largest age group is the age group 30-49 years (38.91%).[8]

In this study, it was found that there were more women than men. Bi et al (2020) also found the same results (52% vs 48%).[7] However, this result is different from Pericas et al (2020) study. Pericas et al found

more men than women.[4] A report by Dawood et al (2020) which states that there are more men than women.[5] Sutaryono et al (2020) also reported that more men suffer from COVID-19 (58.94%).[8]

Bi et al (2020) added that 84% of COVID-19 patients present with fever symptoms. Most symptoms after fever are cough (59.4 - 81.8%) and fatigue (38.1 - 69.6%). Not all patients admitted to the hospital with fever, even some patients with severe COVID-19 do not experienced it.[7] Pericas et al (2020) found that the most symptoms were fever and cough.[4] In this study, it was found that cough was the most symptom of COVID-19 patients. This result is supported by Sutaryono et al (2020), who reported coughing was the most common symptom.[8] Other studies also concluded that fever and cough are the most prevalent symptoms of COVID-19 worldwide.[9,10,11]

The most laboratory results in COVID-19 patients, according to Ge et al (2020) are an increase in C-reactive protein (60.7 - 86.3%) and lymphopenia (35.3 - 82.1%).[12] Ahnach et al (2020) concluded that C-reactive protein (CRP) could be a predictor of disease severity during COVID-19 infection.[13] Wang (2020) found that in the early stage of COVID-19, CRP levels were positively correlated with lung lesions.[14] Leukopenia was found in only 9.1 - 33.7% of COVID-19 patients. However, Wu et al (2020) added that leucocytosis could occur when accompanied by secondary bacterial infection.[15]

In this study, the mean complete peripheral blood laboratory results were normal. Leukopenia was found in 16.67% of patients, while leucocytosis was found in 20.37% of patients. Patients with thrombocytopenia were found in only 1.85% of patients. The average NLR obtained was 3.16. This is likely because most of the patients treated were COVID-19 patients with mild to moderate symptoms. Pericas et al (2020) added that NLR is related to the severity of COVID-19 symptoms.[4] Other studies also concluded that NLR has good predictive values on disease severity and mortality in patients with COVID-19 infection.[16,17,18]

Pericas et al (2020) reported that the radiological features of patients with COVID-19 varied from normal chest X-rays or CT scans in about 10% of cases to pulmonary fibrosis.[4] In a study by Ge et al (2020), a radiological examination for the diagnosis of COVID-19 was a chest computed tomography (CT) examination. The CT scan in COVID-19 patients is diverse and changing rapidly. A normal picture on a radiological examination cannot rule out a diagnosis of COVID-19.[12,19]

Sutaryono et al (2020) reported that the most comorbidities of COVID-19 were hypertension (34.85%), diabetes mellitus (25.76%), and heart disease (17.05%).[8] In this study, hypertension was found in 28% of patients, diabetes mellitus in 13% of patients, and dyspepsia in 20% of patients. Other studies assessed the prevalence of comorbidities might be risk factors for severe COVID-19 patients.[20,21]

The length of stay (LoS) of COVID-19 patients in this study was influenced by the policies used in determining which patients to discharge. The requirement for discharge patient is a patient who has a negative PCR swab twice in a row. However, the LoS in this study is longer than the results of the study by Octavia et al (2020) in Dr. Saiful Anwar Malang Hospital with a mean LoS of 7.8 (2.44) days.[22]

CONCLUSION

The profile of COVID-19 patients in SPH is more in female patients, cough is the most clinical manifestation that appeared, the mean laboratory data (hemoglobin, WBC, and platelet) are normal, and normal chest radiography is the most chest radiograph results in these patients.

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