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EPIDEMIOLOGICAL PROFILE OF COVID-19 IN THE STATE OF ACRE

Lucas Monteiro Molina
Student of medicine course
``*Universidade Federal do Acre*`` - UFAC
https://orcid.org/0009-0005-6120-7528

Rubens Claudino da Silva
Student of medicine course
``*Universidade Federal do Acre*`` - UFAC
https://orcid.org/0009-0004-7621-3093

Marcos Roberto Fernandes
Resident Doctor in Pediatrics
(FUNDHACRE)
Student of medicine course at: ``*Faculdade de Ciências Biomédicas de Cacoal*`` - FACIMED - Cacoal, Rondônia
Resident in Pediatrics at (FUNDHACRE) - ``*Fundação Hospital Estadual do Acre*`` - Rio Branco - AC, Brasil
https://orcid.org/0009-0002-6059-6427

Mariana Araújo Gouveia
Student of medicine course
``*Universidade Federal do Acre*`` - UFAC
https://orcid.org/0009-0002-8740-2637

Isabela Araújo Gouveia
Student of medicine course
``*Universidade Federal do Acre*`` - UFAC
https://orcid.org/0009-0001-9848-0086

Guilherme Ribeiro Lopes Lima
Student of medicine course
``*Universidade Federal do Acre*`` - UFAC
https://orcid.org/0009-0002-0472-9272

Henrique de Campos Mello
Student of medicine course
``*Universidade Federal do Acre*`` - UFAC
https://orcid.org/0009-0009-7113-5897

Pedro Henrique Costa de Castro
Student of medicine course
``*Universidade Federal do Acre*`` - UFAC
https://orcid.org/0009-0007-3609-0190

Isabela Santos Conde
Student of medicine course
``*Universidade Federal do Acre*`` - UFAC
https://orcid.org/0009-0001-5364-5449

Liryvania Silva Lira
Student of medicine course
``*Universidade Federal do Acre*`` - UFAC
https://orcid.org/0009-0008-2384-3330

Abstract: Goal: To know the epidemiological profile of individuals diagnosed with COVID-19 in the state of Acre. **Method:** This is a retrospective descriptive-analytical epidemiological study, with data collected through telephone interviews with patients diagnosed with COVID-19, from March 17 to August 26, 2020. The sociodemographic variables analyzed were gender, age group and race/color. **Results:** The study interviewed 1405 individuals diagnosed with COVID-19, the most affected group was between 30-39 years old (37%) patients, female (51%) and mixed race (69%). **Conclusion:** Analysis of the results suggests that the variables gender, age group and race/color may influence COVID-19 infection in the population of Acre. It may be useful to guide future public health measures and disease prevention.
Keywords: Acre. COVID-19. Epidemiological Profile. Race/color. Gender. Age Group.

INTRODUCTION

The COVID-19 pandemic is an unprecedented global public health event that emerged in Wuhan, China, in late 2019 (WU et al., 2020; ZHOU et al., 2020). Due to main transmission through respiratory droplets or contact with contaminated surfaces, the virus quickly spread throughout the world, affecting millions of people (LI et al., 2020).

The disease is caused by a new strain of coronavirus, SARS-CoV-2, which can cause a wide range of symptoms, from asymptomatic infection to severe cases of respiratory illness that can result in hospitalization and death (World Health Organization, 2020).

In response to the pandemic, public health measures such as social distancing, wearing masks, and contact tracing have been implemented globally, along with the development of vaccines (ECDC, 2020, CDC, 2021). Despite efforts, the virus remains a global threat, and it is crucial that we continue

to learn and understand more about its nature and transmission to effectively combat COVID-19 (FAUCI et al., 2020).

In Brazil, the COVID-19 pandemic has been a serious threat, affecting several regions, including the Western Amazon. The country faced a high number of confirmed cases and one of the highest mortality rates compared to other countries (MS, 2021). Since the beginning of the pandemic, it has faced challenges such as a lack of resources, medical equipment, planning and coordination. Although infection rates have recently decreased due to the use of public health measures and vaccination of the population, the pandemic is still a serious threat in Brazil and the fight against COVID-19 is a critical priority for public health and well-being. -being of the population (MS, 2021).

In the Western Amazon, the state of Acre was affected by the pandemic and had a significant impact on health (MEDEIROS et al., 2020). The state has the third smallest population in the country, ahead only of Roraima and Amapá (IBGE, 2020), the region faces additional challenges in responding to the pandemic, such as the lack of adequate medical infrastructure (SANTOS et al., 2020) and the difficulty in accessing healthcare for some indigenous and rural communities (SILVA & OLIVEIRA, 2019).

To control the spread of the disease and protect the health of the population, it is crucial to understand the local situation of COVID-19 and identify the epidemiological profile of the infected population (WHO, 2020). However, over the past few years, despite the significant amount of research on the epidemiology of COVID-19 in different parts of the world (CDC, 2021), few studies have been carried out in the Western Amazon region (SANTOS et al., 2020).

This study aims to fill this gap in the literature, with the main objective of knowing the epidemiological profile of individuals diagnosed with COVID-19 in the state of Acre, analyzing the variables gender, age group and race/color. The hypothesis is that such variables may be risk factors for COVID-19 infection in the population in Acre.

MATERIAL AND METHOD

This is a retrospective descriptive epidemiological study, with a quantitative approach. Data were collected through telephone interviews with individuals diagnosed with COVID-19, from March 17 to August 26, 2020. Confirmed cases of COVID-19 were obtained through notifications from the State Secretariat and Municipal Secretariats of Health of Acre, confirmed by laboratory tests.

Data privacy and security were guaranteed through the use of acronyms (Ids) for the participants' names and data storage in REDCap.

The sociodemographic variables analyzed include gender, age group and race/color of individuals diagnosed with COVID-19. The information collected was analyzed through simple descriptive statistical analysis using Microsoft Office Excel 365®.

The results were presented in Tables, including means of gender, age group and race/color for diagnosed individuals. Simple descriptive statistical analysis was used to evaluate the relationships between sociodemographic variables.

The study was approved by the Research Ethics Committee of the ``*Universidade Federal do Acre*``, Brazil, according to the documentation form, number: 4,012,361 of May 6, 2020 (CAAE: 30781620.5.0000.5010).

RESULTS

A total of 1405 individuals diagnosed with the COVID-19 virus in the state of Acre were analyzed, from March 17 to August 26, 2020.

Regarding the profile of individuals diagnosed with COVID-19, the age range of patients with COVID-19 reveals a heterogeneous distribution, covering patients with ages ranging from less than 19 years old to more than 80 years old. In relation to younger patients, there is a relatively low prevalence, with only 11 patients under 19 years of age (1%). On the other hand, the majority of patients were concentrated in the 30-39 age group, with 515 patients (37%), followed by the 40-49 age group, with 364 patients (26%), and 20-29 years, with 233 patients (16%). From the age of 50 onwards, there was a gradual decrease in the prevalence of patients, with 168 patients aged 50-59 years (12%), 73 patients aged 60-69 years (5%) and 26 patients aged 70 years. -79 years old (2%), reaching a minimum prevalence with 15 patients over 80 years old (1%). The average age of the patients in the sample was 40 years, with a standard deviation of 15 years, as described in Table 1.

Age	Cases	
	Number	%
≤19	11	1
20-29	233	16
30-39	515	37
40-49	364	26
50-59	168	12
60-69	73	5
70-79	26	2
80+	15	1
Total	**1405**	**100**

Table 1: Distribution of COVID-19 cases according to age group. Acre, Brazil 2020.

The results of the analysis of the gender of patients with COVID-19 showed a relatively balanced distribution, with 711 (51%) females and 694 (49%) males, as shown in Table 2. The proportion of patients of males and females in the sample was approximately 50%, indicating a fairly homogeneous distribution in relation to gender.

Gender	Cases	
	Number	%
Female	711	51
Male	694	49
Total	**1405**	**100**

Table 2: Distribution of COVID-19 cases by gender. Acre, Brazil 2020.

Analysis of the results of the race/color variable revealed that the majority of patients in the sample (69%) were mixed race, followed by white patients (19%) and black patients (9%). The range of other races/colors represented only 3% of the sample, as shown in Table 3.

Race/color	Cases	
	Number	%
Brown	974	69
White	262	19
Black	125	9
Other	44	3
Total	**1405**	**100**

Table 3: Distribution of COVID-19 cases according to race and color. Acre, Brazil 2020

DISCUSSION

The discussion of the results obtained in the research on the epidemiological profile of COVID-19 in the state of Acre points to the importance of investigating the variables gender, age group and race/color as possible risk factors for infection by the disease.

Regarding gender, analysis of the results demonstrated that there was a relatively balanced distribution, with 711 females and 694 males, suggesting that both genders are equally vulnerable to the virus. These results are similar to those found by other studies,

both in Brazil (SILVA et al., 2020) and in the United States (CHUGHTAI et al., 2020), which also did not identify significant differences in the incidence of the disease between genders.

Regarding the age range of the patients, the results of this study showed a heterogeneous distribution, with the majority of patients concentrated in the 30 to 49-year-old age range. Among; the 30-39 age group was the most affected, with 515 patients, followed by the 40-49 age group, with 364 patients.

These results are consistent with other studies, such as "Epidemiological and clinical characteristics of COVID-19 cases in an adult population in Rio de Janeiro, Brazil" (CUNHA et al., 2020), which also identified a higher incidence of the disease in adults' young people. Therefore, the results for the age group point to a similar trend in different countries, suggesting that the highest incidence of the disease occurs among patients of average age. (SILVA et al., 2020; CHUGHTAI et al., 2020).

Other studies also highlighted the importance of considering different age groups when analyzing the incidence of the disease, as different age groups present different levels of vulnerability (MARTINS et al., 2020).

In summary, the distribution of COVID-19 cases by age group shows that the disease affects individuals of different ages and that it is important to consider these differences when analyzing incidence and implementing disease prevention and control strategies. It is important to highlight that the results presented must be carefully compared with other studies, since the distribution of cases may vary according to the region and the characteristics of the population studied. The distribution of patients by race/color showed a predominance of brown patients (974), followed by whites (262), blacks (125) and other races/colors (44). These results suggest that race/color may be a risk factor for COVID-19 infection, corroborating the findings of other studies, such as "Racial and social inequalities in COVID-19: systematic review" (BARBOSA et al., 2020), which also identified inequalities in the distribution of the disease in relation to race/color.

The analysis of the epidemiological situation of COVID-19 in the state of Acre proved to be consistent with other studies already carried out, pointing to the importance of investigating the variables gender, age group and race/color as risk factors for infection by the disease. Furthermore, the results highlight the need to adopt measures to combat inequalities in the distribution of COVID-19.

These measures include monitoring these variables and implementing public policies that aim to reduce inequalities and guarantee equal access to treatment and disease prevention for the entire population.

It is important to highlight that the conclusions of this study are based on a limited sample and may be influenced by several factors, including the quality of data collection, the representativeness of the sample and the impact of factors not included in the analysis.

Therefore, more studies are needed to have a more comprehensive and accurate understanding of the epidemiological situation of COVID-19 in Acre. Furthermore, carrying out additional research is essential to expand knowledge about the epidemiological profile of COVID-19 and contribute to the formulation of effective strategies for preventing and controlling the disease.

FINAL CONSIDERATIONS

The present study highlights the importance of knowing the epidemiological profile of individuals diagnosed with COVID-19 in the state of Acre. The majority of those infected are female individuals between 30 and 39 years old and of mixed race/color.

The results of the study point to a heterogeneous distribution of confirmed cases of the disease in relation to age group and race/color, while gender shows a homogeneous distribution, which suggests that sociodemographic variables may have an influence on COVID-19 infection. This information is crucial for implementing effective disease prevention and control measures, as well as for planning public health actions.

Finally, the research contributed to understanding the epidemiology of COVID-19 in Acre, and could be useful in guiding public health policies for this region.

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