Clinical-epidemiological profile of patients with Covid-19 treated at a peruvian jungle hospital 2020

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CLINICAL-EPIDEMIOLOGICAL PROFILE OF PATIENTS WITH COVID-19 TREATED AT A PERUVIAN JUNGLE HOSPITAL 2020

PERFIL CLÍNICO Y EPIDEMIOLÓGICO EN PACIENTES COVID-19 ATENDIDOS EN UN HOSPITAL DE LA SELVA PERUANA 2020

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ABSTRACT

Introduction: The epidemic that had its beginning in the city of Wuhan in December 2019, has become a public health problem that is advancing at dizzying steps. **Objective:** To determine the clinical and epidemiological profile in Covid-19 patients attended at the HASA-I - Utcubamba, 2020. **Methods:** The type of research was observational, descriptive and retrospective cross-sectional. The population consisted of 312 patients from which a sample of 173 patients was extracted that met the conditions of being representative and adequate. All data processing and statistical calculations were performed using Microsoft Excel 2019 software. **Results:** Regarding the results, it was determined that the epidemiological profile: male gender a total of 102 and female gender 71, representing 59,0% and 41,0% respectively; average age of 45 years; most affected place of origin, the city of Bagua Grande, with a frequency of 162, which represents 93,6%. Regarding the clinical profile: diabetes mellitus presented a total of 7 cases, representing 4,1%; cardiovascular diseases with a frequency of 6, representing 3,5%; general malaise with a total of 75 cases, representing 43,4%; fever with a frequency of 66 cases, representing 38,2%; cough with a frequency of 56 cases, representing 32,4%; headaches with a frequency of 50 cases, representing 28,9%; and dyspnea with a frequency of 34, representing 19,7%. **Conclusion:** The male gender was predominant with comorbidities such as diabetes mellitus, general malaise and elevated CRP.

Keywords: Covid-19; Epidemiology; Comorbidity; Signs and symptoms. (Source: MeSH NLM).

RESUMEN

Introducción: La epidemia que tuvo su inicio en la ciudad de Wuhan en diciembre del 2019, se ha convertido en un problema de salud pública que avanza a pasos vertiginosos. **Objetivo:** Determinar el perfil clínico y epidemiológico en pacientes Covid-19 atendidos en el HASA-I - Utcubamba, 2020. **Métodos:** El tipo de investigación fue observacional, descriptivo y transversal retrospectivo. La población estuvo constituida por 312 pacientes de la cual se extrajo una muestra de 173 pacientes que cumplía con las condiciones de ser representativa y adecuada. Todo el procesamiento de datos y cálculos estadísticos se realizaron a través del software Microsoft Excel 2019. **Resultados:** En cuanto a los resultados, se determinó que el perfil epidemiológico: género masculino un total de 102 y género femenino 71, representando el 59,0% y el 41,0% respectivamente; edad promedio de 45 años; lugar de procedencia más afectado, la ciudad de Bagua Grande, con una frecuencia de 162, la cual representa el 93,6%. Respecto al perfil clínico: la diabetes mellitus tipo 2 (DM2) presentó un total de 7 casos, representando el 4,1%; enfermedades cardiovasculares con una frecuencia de 6, representando el 3,5%; malestar general un total de 75 casos, representando el 43,4%; fiebre con una frecuencia de 66 casos, representando el 38,2%; tos con una frecuencia de 56 casos, representando el 32,4%; cefaleas con una frecuencia de 50 casos, representando el 28,9%; y disnea con una frecuencia de 34, representando el 19,7%. **Conclusión:** El género masculino fue predominante con comorbilidades como DM2, malestar general y PCR elevada.

Palabras claves: Covid-19; Epidemiología; Comorbilidad; Signos y síntomas. (Fuente: DeCS BIREME).

INTRODUCTION

The epidemic that began in the city of Wuhan in December 2019 has become a problem of public health that advances at vertiginous steps. Its progress was so overwhelming that, as of March 2020, 114 countries were affected. Its arrival in the American continent was reported on January 23, 2020, confirming the first case in Argentina, while in Peru, the first infection was registered on March 6, 2020 in the city of Lima.

The main problematic reality of underdeveloped countries such as Peru is related to the fact that not all departments have standardized reverse transcriptase-polymerase chain reaction (rRT-PCR) tests, which help in the diagnosis of molecular. Likewise, the poorest departments and provinces, such as the province of Utcubamba, did not have vaccines that serve the specific antiviral treatment against Covid 19, having as their only resource non-exposure as a means of prevention the rational use of equipment. Individual protection.

Taking all this into account, it is understood that contagion by this disease involves all the medical aspects of which it is pertinent to investigate: clinical, laboratory, and epidemiologica characteristics, to reach a better understanding of the condition for the sake of greater and more effective scientific treatment. Especially in places that do not have research related to this current and vital problem, as is the case in Hospital Apoyo I Santiago Apóstol in the province of Utcubamba (HSA), which has a large rate of cases that are progressively increasing, of which The clinical profile that would contribute to studying the main comorbidities that are related to arterial hypertension, obesity and diabetes mellitus is not yet available; diseases that could accelerate the progression of the disease and therefore premature death [5].

Likewise, the HSA of the province of Utcubamba does not have an epidemiological profile that allows for studying morbidity, that is, the evolution of the disease and its prevalence according to gender, place of origin, and age. Important data that allow a better knowledge of the virus and its differential impact [6] according to these demographic characteristics.

The objective of this study was to determine the clinical and epidemiological profile in Covid-19 patients treated at the HSA - Utcubamba, 2020.

METHODS

Type of design and area

An observational, descriptive and cross-sectional study was carried out. The study area was in Utcubamba, Amazonas, Perú, the hospital is located in an area called Bagua Grande.

Population and sample

The population consisted of 312 patients, of which 173 were selected with a confidence level of 95% and 5% error, of patients diagnosed with Covid-19 treated at the HSA - Utcubamba during August - December of 2020. Patients who had positive results using a serological test or radiological criteria were chosen. Patients with incomplete or ineligible medical records were excluded. The sampling was for convenience and the diagnosis was given by a positive result of the IGG/IGM rapid test and according to the clinical-radiological criteria.

Variables and instruments

To execute said investigation, we resorted to the use of an elaborated technical chart with which the data was extracted from the conventional clinical histories of each patient, which specifies the main epidemiological and clinical characteristics of the patients diagnosed with Covid-19 treated at the HSA during the months of August - December 2020. Sociodemographic data such as age, gender and origin were evaluated. In the clinical profile, comorbidities (type II diabetes mellitus, cardiovascular diseases (heart attack, angina, stroke, among others), chronic lung disease, arterial hypertension, others), clinical signs and symptoms (general malaise, fever, cough, headache) were evaluated. , dyspnea, among others) and the laboratory findings, the following were considered: High CRP if it was greater than 10 mg/L, Elevated leukocytes if it was greater than 4,5 to 11×109/L; Lymphopenia if it was less than 1,5 $(5) \times 109$/L.

Procedure

Permission was requested from the ethics committee of the university, once its approval was given, permission was requested from the hospital, which granted permission to review the hospital file, where data from the medical records of patients with confirmed diagnosis of COVID-19 by serological test or PCR. The data collected was entered into the database at the end of each day.

Statistical analysis

A database was created in the Microsoft Excel 2019 program, the statistical analysis was carried out in the STATA 16 program. For the analysis of normality distribution, the Kolmogorov Smirnov Test was used, according to this analysis, the variables The qualitative variables were presented in absolute frequencies and percentages, the quantitative variables were presented according to the measures of central tendency (mean, standard deviation (SD)). Subsequently, all the quantitative variables were categorized according to the literature to make them qualitative.

Ethical aspects

The study was approved by the ethics committee of the Universidad Señor de Sipán and with authorization from the HSA management. The data collection forms were coded to avoid the identification of the patients.

RESULTS

A total of 173 patients were reported, most of whom were male Table 1, with a mean age of 44,7 years (SD 5,8).

Table 1. Gender, age and place of origin of the Covid-19 patients treated at Hospital Apoyo I Santiago Apóstol – Utcubamba 2020

Characteristics	n	%
Gender		
Male	102	59,0%
Female	71	41,0%
Age		
0 – 11	3	1,7%
12 – 17	6	3,5%
18 – 29	26	15,0%
30 – 59	104	60,1%
60 – 90	34	19,7%
Place of origin		
Bagua grande	162	93,6%
Cajaruro	6	3,5%
Aramango	2	1,1%
Other	3	1,8%

Source: Personal elaboration. Data collection sheet of the epidemiological and clinical characteristics of the Covid-19 patients treated at Hospital Apoyo I Santiago Apóstol - Utcubamba 2020

22 patients with comorbidities were found, of these the highest frequency was diabetes mellitus, the rest of the patients did not presented comorbidities (Table 2).

Table 2. Most recurrent comorbidities of Covid-19 patients treated at Hospital Apoyo I Santiago Apóstol - Utcubamba 2020.

Comorbidity	n	%
Type II diabetes mellitus	7	4,1
Cardiovascular disease	6	3,5
(heart attack, angina, stroke, etc.)		
Chronic lung disease	3	1,7
Hypertension arterial	2	1,2
Other	4	2,4

Source: Personal elaboration. Data collection sheet of the epidemiological and clinical characteristics of the Covid-19 patients treated at Hospital Apoyo I Santiago Apóstol - Utcubamba 2020

The most frequent signs or symptoms were general malaise and fever, the least frequent were nausea or vomiting. Table 3

Table 3. Signs and symptoms of Covid-19 patients treated at Hospital Apoyo I Santiago Apóstol - Utcubamba 2020.

Sign or symptom	n	%
General malaise	75	43,4
Fever	66	38,2
Cough	56	32,4
Headaches	50	28,9
Dyspnea	34	19,7
Changes in taste and smell	31	17,9
Odinophagia and runny nose	18	10,4
Diarrhea	10	5,8
Nausea and vomiting	7	4,1

Source: Personal elaboration. Data collection sheet of the epidemiological and clinical characteristics of the Covid-19 patients treated at the Hospital Apoyo I Santiago Apóstol - Utcubamba 2020

Table 4. Laboratory findings in the patients Covid-19 treated at the Hospital Apoyo I Santiago Apóstol - Utcubamba 2020.

Laboratory findings	n	%
C-reactive protein Elevated	10	7,3
Leukocytes	10	7,3
Lymphopenia	0	3,5
Others	0	0

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DISCUSSION

Currently, Covid-19 is considered one of the most dismal pandemics in history, not only because of the abrupt increases in mortality rates throughout the world but also because of the symptoms and comorbidities that it can trigger, these being painful and lethal. Epidemiological and clinical studies are still an open field due to the variants that this disease has developed, which continue to mutate and continue to express themselves in different clinical manifestations and laboratory findings.

In the present investigation, it was possible to identify the epidemiological characteristics that include the gender, age, and place of origin of the AHS patients.

Regarding gender, the highest prevalence [3,5,7,8] in the male gender since they have a greater genetic predisposition to [9,10] contract this type of disease. The average age in general, was 44,7 years, with adults and older adults being the most affected. These results were partially similar in other studies, indicating that the disease tends to have a greater impact on these people because the immune system [8,12] deteriorates over time. Regarding the place of origin, 93,6% resided in the city of Bagua Grande, the capital of Utcubamba, which represents a greater centralization of people and an [5,12]. a higher risk of contagion.

Regarding the main comorbidities presented in HSA Covid-19 patients, diabetes mellitus, cardiovascular diseases, and [5,12] high blood pressure stood out, which generated an unfavorable clinical course due to the weakening of the [8] immune and circulatory system.

Consequently, it was possible to identify the symptoms and signs presented by SAH patients, the main one being general malaise, characterized by [13] fatigue and diffuse pain were also present. Fever and cough [9,14] Covid-19. Likewise, dyspnea and headaches can occur due to a lack of oxygen and [15] blood supply.

Regarding the identification of the first laboratory findings, which have been the study material of many investigations, elevated CRP, elevated leukocytosis, and lymphopenia were found, findings [16] that are shared by other investigations because they are samples that represent the presence of infections at the blood level and product of the deformation of antibodies that help [17] fight this microorganism.

The limitations of the research were the small sample compared to the studies carried out at a national and international level. Likewise, the study was only carried out at a retrospective and descriptive level. However, it represents the first study carried out in the HSA and in the province of Utcubamba. Another limitation arose in the equipment of the laboratory instruments that were required to carry out more specific tests; however, the most basic and necessary ones could be carried out with the help of the medical and administrative personnel who provided the required information at all times.

CONCLUSIONS

The epidemiological and clinical profile of the HSA Covid 19 patients were: Predominantly male gender with an average age of 44,7 years; the most affected place of origin, the city of Bagua Grande. According to main comorbidities: Diabetes Mellitus. According to main signs and symptoms: malaise, according to main laboratory findings: elevated CRP, elevated leukocytosis, and lymphopenia.

Conflicts of interest: The authors declare no conflict of interest.

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