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Clinical-epidemiological characterization of adult patients confirmed with COVID-19 in a medical office in Matanzas

Caracterización clínico-epidemiológica de pacientes adultos confirmados con COVID-19 en un Consultorio Médico en Matanzas

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ABSTRACT

Introduction: In recent years, Covid-19 has greatly affected the world's population. In Cuba, active research efforts in Primary Health Care (PHC) contributed to controlling and reducing the effects of this disease.

Objective: to clinically and epidemiologically characterize adult patients confirmed to have COVID-19 in a Medical Office in Matanzas.

Methods: a descriptive, observational, retrospective and cross-sectional study was carried out during 2021. The universe consisted of 97 adult patients with the disease, which was studied in its entirety. The variables analyzed were: age, sex, presence of symptoms, source of infection, diagnostic method used, personal pathological history and status at discharge. Descriptive statistics were used (absolute and relative frequencies).

Results: a greater predominance of the male sex was evident, with an age range between 30-39 years. The autochthonous source of infection predominated. Symptomatic patients were the most affected and the Antigen Test was the most useful diagnostic method. Hypertensive patients predominated and a large percentage represented the rate of patients cured upon discharge.

Conclusions: Covid 19 largely affected, through autochthonous transmission, male adults over 30 years of age who also presented symptoms associated with the disease, which were diagnosed with the Antigen Test.

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RESUMEN

Introducción: en los últimos años la Covid-19 ha afectado en gran medida a la población mundial. En Cuba las labores de pesquisa activa en la Atención Primaria de Salud (APS) contribuyeron a controlar y reducir los efectos de esta enfermedad.

Objetivo: caracterizar clínico-epidemiológicamente a pacientes adultos confirmados a la COVID-19 en un Consultorio Médico en Matanzas.

Método: se realizó un estudio descriptivo, observacional, retrospectivo y transversal durante el año 2021. El universo estuvo constituido por 97 pacientes adultos con la enfermedad, el cual se estudió en su totalidad. Las variables analizadas fueron: la edad, sexo, presencia de síntomas, fuente de infección, método de diagnóstico utilizado, antecedentes patológicos personales y estado al alta. Se utilizaron los estadígrafos descriptivos (frecuencias absolutas y relativas).

Resultados: se evidenció mayor predominio del sexo masculino, con un rango de edad entre 30-39 años. Predominó la fuente de infección autóctona. Incidió los pacientes sintomáticos y el Test de Antígeno fue el método diagnóstico con mayor utilidad. Predominaron los pacientes hipertensos y un gran porcentaje representó el índice de pacientes curados al alta.

Conclusiones: la Covid 19 afectó en gran medida a través de la transmisión autóctona, a los adultos masculinos que superaron los 30 años de edad y que a su vez presentaron síntomas asociados a la enfermedad, los cuales fueron diagnosticados con el Test de Antígeno.

INTRODUCTION

Since late 2019, the world has been hit by the COVID-19 pandemic, the causative agent of which is the SARS-CoV-2 coronavirus. It was first revealed at the end of this year in the city of Wuhan, China. On March 11, 2020, it was declared a pandemic by the World Health Organization (WHO) and in Cuba, the first cases from Italy were diagnosed that same day. [1]

The transmission of SARS CoV-2 occurs through small microdroplets, which are emitted when speaking, sneezing or coughing. When expelled by a carrier, they pass directly to another person through inhalation or remain on objects and surfaces that then, through the hands, come into contact with the oral, nasal and ocular mucous membranes. [2]

Symptoms generally begin three to seven days after the person is infected, these symptoms may include: fever, runny nose, sore throat, cough, fatigue, muscle aches, shortness of breath, expectoration, hemoptysis and diarrhea. In some people, it can occur asymptomatically. [3]

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In 80% of cases, it presents as a mild or moderate respiratory clinical picture, in 15% as severe and only in 5.0% as critical. As of the beginning of April 2021, 182 countries had reported positive cases for a total of 1,563,857 infected patients. In Latin America, the reported cases correspond to 34.4% of the world total, equivalent to 537,678 people. [4]

In Cuba, active research efforts in Primary Health Care (PHC) contributed to controlling and reducing the catastrophes of these epidemiological events. [5]

According to the Cuban Health Statistical Yearbook 2021, COVID-19 caused 8,091 deaths, for a rate of 72.3 per 100,000 inhabitants. The incidence was 954,417 cases, with a rate of 8,532.2 cases per 100,000 inhabitants. The province of Matanzas reported 76,038 cases, which represented 7.96% of the total cases. [5]

Due to the health impact of COVID-19, as well as the limited dissemination of similar studies at the local level, this research was carried out with the aim of clinically and epidemiologically characterizing adult patients confirmed to have COVID-19 in a Medical Office in Matanzas.

METHOD

A descriptive, observational, retrospective and cross-sectional study was conducted in adult patients confirmed with COVID-19, at the Family Doctor's Office No. 46 of the "Samuel Fernández Álvarez" Polyclinic in the municipality of Matanzas, during 2021.

The universe consisted of 97 patients diagnosed with said disease during the study period. All patients aged 20 years or older with a confirmed diagnosis of COVID-19 were included. Patients with a suspected diagnosis of COVID-19 were excluded. The variables analyzed were: age in years distributed in intervals (20-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80-89, ≥90. Sex: male (M) and female (F). Presence of symptoms: symptomatic and asymptomatic. Source of infection: autochthonous (if transmission occurred by people within the territory) or imported (if transmission occurred outside the territory). Diagnostic method used: PCR and Antigen Test. Personal Pathological History: Arterial Hypertension, Bronchial Asthma, Diabetes Mellitus, Ischemic Heart Disease, Obesity, Glaucoma,

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Hyperuricemia, others (Alzheimer's, Parkinson's, Stroke, Fibromyalgia, Osteoporosis, Osteoarthritis and Rheumatoid Arthritis). Status at discharge: cured or deceased.

Primary sources such as individual medical records and family medical records. From a statistical point of view, the data collected were processed in Excel, which allowed the storage of information and the calculation of absolute and relative percentage frequencies.

The confidentiality of the data obtained was respected. The premise was to respect the ethical principles of studies with human beings, established in the Second Declaration of Helsinki and in Cuban ethical standards. The research was approved by the Management of the Samuel Fernández Polyclinic.

RESULTS

Table 1 shows a greater predominance of the male sex with 57 for 58.76%. The age range with the highest incidence was between 30-39 years with 24 for 24.74%; and likewise the most affected sex in this group was the male with 15.46%.

Table 1: Distribution by age and sex of adults diagnosed with Covid-19 in the Family Medical Office No. 46 of the "Samuel Fernández Álvarez" Polyclinic in the municipality of Matanzas, during 2021

Age range	Sex				Total	
	Male (M)		Female (F)			
	No	%	No	%	No	%
20-29 years	11	11,34	7	7,22	18	18,56
30-39 years	15	15,46	9	9,28	24	24,74
40-49 years	8	8,25	9	9,28	17	17,53
50-59 years	7	7,22	6	6,19	13	13,41
60-69 years	7	7,22	4	4,12	11	11,34
70-79 years	3	3,09	1	1,03	4	4,12

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80-89 years	4	4,12	2	2,06	6	6,18
≥90 years	2	2,06	2	2,06	4	4,12
Total	57	58,76	40	41,24	97	100

Source: Family and individual medical records.

Table 2 shows a higher rate of infection in male patients with 57 for 58.76%. The autochthonous source of infection predominated with 93 cases, which represents 95.87%.

Table 2: Distribution according to source of infection and sex

Source of Infection	**Sex**				**Total**	
	Male (M)		**Female (F)**			
	No	**%**	**No**	**%**	**No**	**%**
Natives	54	55,67	39	40,21	93	95,88
Imported	3	3,09	1	1,03	4	4,12
Total	57	58,76	40	41,24	97	100

Source: Family and individual medical records.

In **Table 3**, symptomatic patients predominated with 59 for 60.82%, where 31.85% were male. The Antigen Test was the most useful diagnostic method applied to 51 of the cases, which represents 52.58%.

Table 3: Distribution according to symptoms, sex and diagnostic method used

Source of Infection	**Sex**				**Total**	
	M		**F**			
	No	**%**	**No**	**%**	**No**	**%**
Symptomatic	31	31,95	28	28,86	59	60,82
Asymptomatic	26	26,80	12	12,37	38	39,17
Total	57	58,75	40	41,23	97	100
Diagnostic method used						

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PCR	30	30,92	16	16,49	46	47,42
Antigen Test	27	27,84	24	24,74	51	52,58
Total	57	58,76	40	41,24	97	100

Source: Family and individual medical records.

In **Table 4**, hypertensive patients predominated with 54 for 55.67%.

Table 4: Distribution according to Personal Pathological History

Personal Pathological Background	No	%
High Blood Pressure	54	55,67
Bronchial Asthma	12	12,37
Diabetes Mellitus	48	49,48
Ischemic heart disease	12	12,37
Obesity	11	11,34
Glaucoma	4	4,12
Hyperuricemia	2	2,06
Otros	47	48,45

Source: Family and individual medical records.

In **Table 5**, 96.91% represented the rate of cured patients, while 3 patients died for 3.09%.

Table 5: Distribution according to the status of patients at medical discharge

Status at medical discharge	Sex				Total	
	M		F			
	No	%	No	%	No	%
Cured	56	57,73	38	39,18	94	96,91
Deaths	1	1,03	2	2,06	3	3,09
Total	57	58,76	40	41,24	97	100

Source: Family and individual medical records.

DISCUSSION

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At a global level during 2021, there was variability in the notification of each of the cases detected with Covid-19, where there was a greater predominance of the male sex. In the investigations carried out by Ruiz Cantero et al., [6], Chen Nanshan et al., [7], Escobar et al., [8] the male sex prevailed. Authors such as Hernández Pupo, et al [9], Llaro et al [10], Narro [11] in their articles show a predominance of the male sex and patients with ages between 19-40 years, 60-79 years and 70-75 years, respectively.

For their part, research carried out by Carbajales León et al., [12], Hernández Velázquez et al., [13], Ferrer Castro et al., [14], showed a predominance of the female sex and patients with ages equal to or greater than 60 years, which differ from the study presented.

There are several reports that justify the lower female susceptibility to contagion; Since the beginning of the pandemic, the possible female resistance to the virus has been discussed. It is thought that the low susceptibility of women to viral infections may be due to the protection of the extra X chromosome that they have compared to men. [15]

In the works presented by Hernández Velázquez et al., [13] and Cuello Carballo et al., [(16)] a higher rate of asymptomatic patients is shown with 100 and 85.7% and with an autochthonous source of transmission for 46.66 and 38.5%. On the other hand, in the works of Medina Fuentes et al., [17] and Estrada García et al., [18] the majority of cases were imported, which does not coincide with the results of the study presented.

Various studies agree that the most frequent comorbidity in patients positive for COVID-19 is arterial hypertension, this may be due to the fact that it is one of the diseases with the highest incidence rate in the Cuban population.

This is shown by Cobas Planchez et al., [19] and Medina Fuentes et al., [17] in their articles where 36.7 and 53.8% of patients presented arterial hypertension as the most frequent comorbidity, data that coincide with the study carried out.

The authors declare as a limitation of the study that more aspects or other data of interest could not be provided because the clinical histories and family records were mostly out of date and only showed each of the data presented in the research.

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CONCLUSIONS

Covid-19 largely affected, through autochthonous transmission, male adults over 30 years of age who also presented symptoms associated with the disease, which were diagnosed with the Antigen Test.

DECLARATION OF CONCLICT OF INTERES

The authors declare that they have no conflict of interest in the conduct of the research.

DECLARATION OF FINANCING

The authors declare that they have not received funding for this research.

DECLARATION OF AUTHORSHIP

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