

CLINICAL FEATURES OF COVID-19 IN BARCELONA CITY

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INTRODUCTION

In Spain, the first positive case of SARS-Cov-2 was diagnosed on 31 January 2020 in the Canary Islands and, as of 7 May 2020, there have been 221,447 cases, the most in any European Union country (1). The most common signs of infection are respiratory symptoms and the transmission of the virus before symptom onset is unclear. Most initial clinical studies have been carried out in China and there are no studies in the Mediterranean population. This study aimed to describe the clinical, biological and radiological manifestations, the evolution, treatments and mortality rate of patients with COVID-19 infection in the population of Barcelona city.

METHODS

We made a multicenter observational descriptive study of the first COVID-19 patients diagnosed by polymerase chain reaction (PCR) in urban primary care centers serving an assigned population of 100,000, with the same reference hospital, in Barcelona city. All data were obtained from the medical record. Signs and symptoms, the main available haematological and biochemical data and the results of imaging tests were recorded, as were comorbidities, the evolution, the hospitalization rate, intensive care unit (ICU) admission and the treatments received. The study was conducted according to the Helsinki Declaration and Spanish legislation on biomedical studies, data protection and respect for human rights.

RESULTS

We included 322 patients with a mean age of 56.7 years (standard deviation [SD] 17.8) of whom 50% were female and 115 (35.7%) were aged ≥ 65 years (Figure 1). The most frequent symptoms were cough (73.9%), fever (63.8%), general discomfort (43.5%), fatigue (30.7%), myalgia (30.1%), dyspnea (25.5%), diarrhea (23%), headache (20.8%), anosmia (17.4%) and dysgeusia (14.9%). Examination showed 69.1% had auscultatory alterations, 28.7% tachypnea and 20.5% an oxygen saturation of $\leq 92\%$. The most frequent comorbidities were hypertension (33.9%), diabetes mellitus (14.3%) obesity (14.3%). Chest X-rays was made in 227 (70.5%), chest CT in 28 (8.7%) and pulmonary ultrasound in 10 (3.1%). Radiologic findings showed lobar pulmonary infiltrates in 15.8%, bilateral pulmonary infiltrates in 57.9% and an interstitial pattern in 24.1%. Analyses showed lymphopenia in 81.4%, LDH $>250\text{U/ml}$ in 60.8%, hypokalemia in 20.3%, elevated AST in 41.4%, elevated ALT in 32.4%, and elevated D-dimer $>500\text{g/L}$ in 52.1%. Hydroxychloroquine was administered in 50.3% of patients, azithromycin in 46.3%, lopinavir/ritonavir in 41%, glucocorticoids in 11.5% and tocilizumab in 8.4%. Hospitalization was required in 49.1% of patients (mean stay 9.4 [SD 5.8] days) and ICU admittance in 13%: 37 (11.5%) acute respiratory distress syndrome, 8 (2.5%) severe renal failure, 4 (1.2%) pulmonary thromboembolism and 3 (0.9%) sepsis. Overall mortality was 5.6%. Primary care home monitoring was made in 17.7% patients and 51.6% took sick leave. Seventy-two (22.4%) patients reported contact with confirmed/suggested COVID 19 at work and 50 (15.5%) in the family.

DISCUSSION

This study summarizes the clinical, biological and radiological characteristics of patients with COVID-19 disease. Our data show differing findings from other studies (2-4), such as more diarrhea, dysgeusia, anosmia, hypokalemia and elevated

transaminases and suggests work contacts as a possible source of contagion. In our patients, comorbidities were three times higher than in the Chinese cohort and were similar to the findings of the New York study (4). The same comorbidities were identified, with hypertension and diabetes being the two most common. Three months into the pandemic, most countries lack a reliable and available diagnostic test. Therefore, determining the clinical, biological and radiological characteristics of suspected cases of SARS-CoV-2 infection will be key to initiating early treatment and isolation, as will contact tracing from Primary Healthcare.

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COMPETING INTERESTS

The authors have declared no competing interests.

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