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Demographic and clinical characteristics of patients with Covid-19 in Chihuahua, Mexico

Dear editor: Rapid identification of Covid-19 cases it is crucial to achieve outbreak control. This is a challenge due to a wide range of clinical presentations.¹ SARS-CoV-2 manifests like infections of the upper respiratory tract of varying severity and can cause multi-organ disease.² The knowledge of all presentations is vital to prevent sustained transmission, to provide early and accurate diagnosis and treatment, and improve the prognosis.

We conducted a prospective cohort study at the *Hospital Central Universitario de Chihuahua*, Mexico, for suspected Covid-19 patients, to identify demographic characteristics and the clinical pictures manifested by Chihuahua state population.

In the cohorts we identified risk factors for hospitalization: ≥ 55 years (OR=15.35; 95%IC 3.53-66.78;

$p=0.002$), male sex (OR=3.02 95%IC 1.27-7.19; $p=0.009$), comorbidities like a history of systemic arterial hypertension (SAH) (OR=7.11; 95%IC 2.06-24; $p=0.000$), and diabetes mellitus (DM) (OR=16.47; 95%IC 2.18-123.99; $p=0.000$); among the signs and symptoms studied, fever (OR=4.72; 95%IC 1.93-11.52; $p=0.000$) and dyspnea (OR=5.91; 95%IC 2.46-14.21; $p=0.000$).

The risk factors for mortality were: ≥ 65 years (OR=8.667; 95%IC 4.72-15.89; $p=0.000$), male sex (OR=1.522; 95%IC 0.87-2.63; $p=0.013$); comorbidities like SAH (OR=2.528, 95%IC 1.48-4.31; $p=0.001$) and chronic kidney disease (CKD) (OR=3.59, 95%IC 1.46-8.77; $p=0.003$). No signs and symptoms were identified as risk factors.

An attempt was made to find relationships between pathological history and clinical manifestations: CKD increases the probability of fever (OR=1.350, 95%IC 0.50-3.57); cancer increases the risk of myalgias and arthralgias (OR=3.146; 95%IC 0.38-25.99). Overweight or obesity (OR=1.70; 95%IC 0.77-3.73), CKD (OR=2.26; 95%IC 0.50-10.02) and cancer (OR=1.51; 95%IC 0.18-12.64) increase the possibility of headache.

Chronic obstructive pulmonary disease (COPD) increases the probability of chest pain (OR=1.327; 95%IC 0.251-7.013); cancer (OR=1.387; 95%IC 0.272-7.076) or CKD (OR=2.064; 95%IC 0.795-5.356) increases risk of diarrhea, although overweight or obesity is significantly related to this manifestation ($p=0.035$). SAH ($p=0.000$), overweight or obesity ($p=0.002$) and DM ($p=0.000$) are associated with headache.

In conclusion, clinical characteristics of our state population were identified, it was determined that an age ≥ 55 and/or male sex, comorbidities, SAH and DM; and symptoms of fever and headache are risk factors for hospitalization. It should be remembered that none of the signs and symptoms are characteristic for

the diagnosis of Covid-19, however, due to the current situation, it is important to recognize them to isolate patients appropriately and avoid spread among the population. On the other hand, age of ≥ 65 years, male sex, and comorbidities are related to mortality, but none of the symptoms are related to it. It is important to keep comorbidities identified and under control to provide good management of these patients and their symptomatology.

Declaration of conflict of interests. The authors declare that they have no conflict of interests.

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