

On clinical characteristics and outcomes of patients with COVID-19 treated in Spanish emergency departments

Acerca de las características clínicas y evolución de pacientes con Covid-19 atendidos en servicios de urgencias españoles

To the editor:

We have read with interest the article "Evaluation of the clinical characteristics and evolution of patients with COVID-19 from a series of 1,000 patients attended in Spanish emergency departments" by Gil-Rodrigo et al. published in EMERGENCIAS¹. We agree with the analysis of baseline variables such as age and obesity, and their association with an unfavorable course of the disease. However, we consider that race is also a relevant sociodemographic characteristic in this type of patient and should have been evaluated in order to demonstrate its influence on the course and outcome of the disease. Especially considering that several authors had already reported their opinions on the very particular affectation of COVID-19 in certain ethnic groups. Aldrige et al. (2020)² reported that compared to white patients, there is a higher risk of requiring mechanical ventilation or death in black (10.6% vs. 6.5%), Asian

(15.3% vs. 12.2%) and minority ethnic individuals. Sapey et al.³ found a higher risk of death in South Asian ethnic groups due to the higher prevalence of other diseases, such as chronic obstructive pulmonary disease, diabetes mellitus, and atrial fibrillation, compared to white people. In contrast, Raisi-Estabragh et al.⁴ report that the existence of greater COVID-19 involvement and severity in certain racial groups could not be explained, since the predisposing factors associated with this unfavorable prognosis are not due to cardiac, metabolic, socioeconomic or behavioral causes. Therefore, they recommend that research be directed towards biological and genetic susceptibilities. In this regard, a study published in The New England Journal of Medicine⁵ identified a group of genes on chromosome 3p21.31 as a genetic susceptibility locus in patients with respiratory failure due to COVID-19. Additionally, Hou et al.⁶ reported polymorphisms in ACE² or TMPRSS2 DNA implicated in cardiovascular and pulmonary pathologies in African and African-American populations. It is striking that, despite what has been reported in previous pandemics such as the 1918 and 2009 influenza pandemics, where higher mortality rates were observed in blacks compared to whites, no research has been conducted at the biological or genetic level to explain these results. Currently, the new infectious agent SARS-CoV-2 is disproportionately affecting blacks, Asians and other ethnic groups, and its conclusive association with a certain type of human chromosome is unknown due to the lack of related research studies. We believe that, just as there are diseases linked to specific chromosomal regions that affect a particular type of breed, further research should delve into the genetic study to understand the causes of susceptibility and resistance in the various breeds around the world.

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