EDITORIAL

Cardiovascular Complications in COVID-19: The importance of having personal registries

Complicaciones Cardiovasculares de COVID-19: La importancia de tener registros propios

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The disease caused by the Betacoronavirus SARS-CoV-2 spread rapidly around the world, after the first cases were identified in Wuhan, China in late 2019. COVID-19 was initially recognized as a disease that, although it primarily affected the lung, producing alveolar-interstitial parenchymal damage, also caused inflammation in practically every organ that had significant expression of its receptor, the surface ACE2 protein (1). When the virus binds to ACE2 through its S protein and enters the cells of human tissues, endocytosis of the virus-ACE2 complex occurs, and the density of this protein, which plays a fundamental role in anti-inflammatory and antifibrotic homeostasis and also as anticoagulant, decreases. The heart has an important expression of ACE2, not only in its myocardial cells, but also in the endothelium of its vessels and epicardial fat. These circumstances make it a target organ for COVID-19 disease, either directly, through myocarditis or endothelitis and thrombotic complications, or indirectly, by producing an increase in myocardial demand in the presence of a respiratory distress syndrome and systemic inflammatory response. A few months after the first COVID cases were detected in China, the cardiovascular system complications caused by the disease began to be described, with subsequent reports from Europe and the United States. In the latter country, we were among the first to report obesity (endemic in the US), as an independent risk factor, which shifted the curve of those affected to younger ages. (2) This had not been observed in China or Italy, where the proportion of obese people is much lower. Due to the genetic and socioeconomic diversity of the different affected populations, accessibility to different treatments, and the emerging variants of the virus, it is imperative for countries to have their own statistics to act accordingly.

Lucia Kazelian et al. have done an excellent work, reporting the results of the first Argentine registry of cardiovascular complications (RACCOVID-19) (3) with the participation of 50 hospitals from 11 provinces of the country, slightly more than half of the institutions in the Autonomous City of Buenos Aires. It is good to clarify that this registry took place during the first wave of cases detected in Argentina, a period in which the vast majority of diagnosed patients were hospitalized, even those not presenting with serious disease. The registry included 2750 patients, 60% male, with an average age of 57 years. Of these, 36.5% had moderate and almost 13%, critical disease. The rate of cardiovascular complications in this study was 15.3%, in a sample in which almost 90% had at least some cardiovascular risk factor detected. The most frequent complication was heart failure (43.5%) followed by cardiac arrhythmias (33.5%). Myocardial damage (myocardial injury, AMI, or motility disorders on echocardiography) was detected in almost a third of patients, and there were also thromboembolic complications (11%) and myocarditis in almost 2%.

Eighty percent of these patients were discharged from their respective hospitals, and mortality was 19.3%. Similar to other series reported in other countries, the most frequent comorbidities were high blood pressure, obesity and diabetes. (1, 4)

This registry has a lot of very useful clinical and laboratory data, which not only contribute to understanding about how to approach this disease in its acute phase and during hospitalization, but also to establish a follow-up basis for what we now know as prolonged Covid. (5) Knowing one's own statistics is of immense importance, and I congratulate the authors for this great work, as well as the Argentine Society of Cardiology and the Argentine Federation of Cardiology for joining forces around having their own statistics. Much remains to be learned about the cardiovascular sequelae of this disease. Studies such as RACCOVID-19 are undoubtedly the best initiative to undertake this path.

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Conflicts of interest

The author declares to be on the Medtronic Advisory Board, and to have taught educational classes for Roche. None of these activities generate conflicts of interest related to the article.

Ethical considerations

Not applicable.

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