Impact of coronavirus disease 2019 on adult patients with congenital heart disease

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Background: COVID-19 is responsible for a worldwide pandemic, causing more than 18,000 deaths to date in Portugal. Data already exists regarding the increased risk of adverse events in patients with cardiovascular diseases, however the impact of SARS-CoV-2 infection in patients (P) with congenital heart disease (CHD) is still under investigation.
Purpose: To study the impact of COVID-19 in a adult patients with CHD
Methods: Adult patients seen at the CHD outpatient's clinic at a tertiary centre, who became infected with SARS-CoV-2 infection up to December 2021 were included. Assessment of patients' symptoms, need for hospitalization and admission in an intensive care unit was assessed based on medical records.
Results: We identified seventy-nine patients (pts) with COVID-19 infection. Symptoms were present in 67 (84%). The median age was 44 (15) years, 52% were females. Eight P (10%) had complex cyanotic disease; seven Tetralogy of Fallot; five (6%) transposition of great arteries; eight (10%) right ventricle obstacle; two (3%) atrioventricular canal defect; sixteen (20%) atrial septal defect; nine (11%) ventricular septal defect; eight (10%) aortic coarctation; two (3%) had Eisenmenger syndrome. 49% of P had previous surgery or percutaneous procedure. 63% of P were at New York Heart Association (NYHA) class of I and 30% at NYHA II. Mild symptoms were reported by 56 P (71%). Ten adults (7,9%) experienced moderate symptoms (dyspnea and hypoxia) that led to hospitalization for oxygen therapy, none required mechanical ventilation. One death was reported in an 83-year-old patient with non-corrected interventricular communication and compromised biventricular function. There was a significant association between the gravity of CHD and hospitalizations (p=0.02).
Conclusion: Our pts had mainly mild to moderate symptoms and did not appear to have a disproportionately negative outcome; the need for hospitalization was more frequent in patients with higher CHD gravity. These findings are in line with the emerging data regarding COVID-19 in CHD P, and may be in part explained by the patient's young age and functional status.