Aims: Multisystem Inflammatory Syndrome in Children (MIS-C) is a severe condition affecting children previously exposed to SARS-CoV-2. The aim of our study was to describe the acute and late cardiac abnormalities in patients with MIS-C, evaluated by echocardiography and cardiac MRI (CMR).

Methods and results: Twenty-three (13 M, 10 F) patients with confirmed MIS-C diagnosis in 2020 (11 patients in 2020 vs 3 in 2019), especially during the first period of the pandemic: an Italian single-centre experience.

Results: We investigated the occurrence of anxiety and palpitations in CIEDs patients during the COVID-19 pandemic. Patients with CIEDs were likely to experience anxiety and palpitations as symptoms of arrhythmias and device malfunctioning in symptomatic and asymptomatic patients as well.

Conclusions:

- Anxiety and palpitations were observed in patients with CIEDs during the COVID-19 pandemic.
- These symptoms were associated with arrhythmic events.
- Conventional well-being exacerbating physical symptoms such as palpitations.
- Patients support the hypothesis of a post-viral immune-mediated myocarditis-like syndrome of left ventricular dysfunction and/or repercussions of lung disease on the right ventricle.

Acknowledgement: The study was supported by the European Society of Cardiology.
sections. In particular, we evaluated parietal dimensions and thicknesses, biventricular function and transvalvular tricuspid and pulmonary flows and correlated the data obtained with ECG, radiological, clinical, and biohumoral parameters. The aim of our study was to evaluate the prognostic impact of cardiovascular involvement in COVID-19, investigating the effect of cardiovascular risk factors, levels of cardiovascular damage markers and newly emerging ECG and echocardiographic changes on a composite primary endpoint, consisting of the combination of exitus and the need for intensive care (ICU). For this purpose, the enrolled patients were divided into two subpopulations: those with better prognosis and those with poorer prognosis (ICU/exitus). We then analysed the reciprocal correlation of each of the investigated parameters and searched for the presence of echocardiographic signs of repercussion on the right sections of the pulmonary pathology. Among the patients with the poorest prognosis, 81.2% were hypertensive, 12.5% diabetic, 25% dyslipidaemic. Comparing the two subpopulations analysed, it emerged that patients with the worst prognosis were known hypertensive (P < 0.02). Longer QTc intervals were associated with higher levels of CRP (P < 0.0001) and PCT (P < 0.005). All markers of cardiovascular damage had significantly higher values in the most critically ill patients (P < 0.001 for D-dimer, P < 0.001 for baseline and peak Troponin, P < 0.001 for CK-MB, P < 0.007 for BNP) and similar behaviour had indices of inflammation (P < 0.001 for PCR and IL-6).

Patients with poorer prognosis had significantly lower lung AcT values (P < 0.002), which correlated with higher D-dimer levels (P < 0.01) and more complicated hospital stays (P < 0.02). There were no statistically significant differences between PAPs, right ventricular size, TAPSE, and pulmonary trunk diameter in the two subpopulations. Larger right ventricular diameters were associated with more dilated lung trunks (P < 0.009) and higher IL-6 levels (P < 0.004). The most interesting data of our study is the behaviour of pulmonary AcT: lower values of AcT were associated with higher levels of D-dimer, as an expression of a greater pulmonary microthrombotic burden, and a poorer prognosis, in the presence of PAPs basically normal. The dynamic analysis of this parameter, which is easy to calculate in the patient’s bed, can play a crucial role in the instrumental follow-up of patients hospitalized for SARS-CoV-2 infection.