22.6.1 - Myocarditis

Acute myocarditis in COVID19 patients. Clinical features, severity and outcomes. Results from Spanish multicenter registry Car-COVID19

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Introduction: COVID19 has emerged as a new disease, spreading around the world, leading to a complete lockdown. It is known that other infectious diseases can affect the heart inducing myocarditis. As a new entity, it was unknown if SARS-COV2 could provoke that cardiovascular manifestation. This national registry was created to describe COVID19 cardiac affection and its severity.

Methods and results: A multicenter registry was conducted, including 28 centers in Spain. Patients with COVID19 diagnosis presenting an acute cardiovascular event between March 1st and May 30th were included. Eighty-two patients were included. Of them, 9 (14,1%, excluding missing data) presented with acute myocarditis; the rest were diagnosed of acute myocardial infarction or stress cardiomyopathy. Baseline characteristics of these patients are summarised in Table 1. The 83,3% of patients with myocarditis presented with heart failure and 25% simulating an acute coronary syndrome.

According to severity, 5 patients (62,5%) were admitted in the Intensive Care Unit, requiring orotracheal intubation 4 patients (57,1%). Left ventricle was affected in 66,7% of patients, whereas the remaining 33,3% presented biventricular failure. Mean left ventricle ejection fraction was 46% [30,0%-52%]. One patient developed refractory cardiogenic shock requiring implantation of both intra-aortic balloon pump and VA-ECMO. Three patients died during hospitalization.

Cardiac magnetic resonance was conducted in 2 patients (28,6%), showing oedema and subepicardial enhacement in postero-lateral segments. Cardiac biopsy was performed in one patient showing significant lymphoid infiltration and intersticial oedema.

Conclusions: Patients with COVID 19 who develop acute myocarditis usually present with heart failure secondary to ventricular failure. This entity has a bad prognosis with high in-hospital mortality rate.

Table 1. Baseline characteristics.

	n (%)
Age	65,0[47,0-77,0]
Sex (female)	3 (42,9%)
Hypertension	3 (42,9%)
Dyslipidemia	3 (42,9%)
Diabetes mellitus	2 (28,6%)
Chronic coronary disease	1 (14,3%)
Previous stroke	1 (14,3%)
Cancer	1 (14,3%)