

# Effects of SARS-CoV-2 Infection on Cardiac Function- Preliminary Data on cardiac MRT

## Parameters after COVID-19

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### **Introduction:**

The SARS-CoV-2 pandemic of 2020 has an influence on people's lives worldwide, impacting global health and putting pressure on health care systems, politics and economies. There have been many studies in terms of Covid-19 describing acute cardiac involvement, but little is known about the long-term cardiac effects and complications after recovery. The aim of this study was to assess subclinical myocardial dysfunction by cardiac magnetic resonance imaging (MRI) in patients after COVID-19-infection.

### **Methods:**

This study was a prospective, multicentre registry study. We included patients after a verified infection with the SARS-CoV-2 virus, who had been discharged from the hospital. Baseline parameters including clinical history, vital signs and symptoms were assessed. In addition, we measured laboratory parameters and transthoracic echocardiography and cardiac MRI were performed in each patient, for morphological and functional assessments.

### **Results:**

In this ongoing trial, we present data of the first 46 patients (27 males, 19 females; median age: 47.5 years (34.0-58.0). 83% of all patients included so far had an only mild to moderate course of disease and 17% of them had a severe course being admitted to an intensive care unit. The median time from hospital discharge to clinical assessment was 29.0 weeks (IQR 23.0-33.0). In 30 of 46 patients cardiac MRI was performed. 16 patients were excluded because of panic attacks or other reasons. After 6 months, 30% of all cardiac MRIs (10 of 30) showed abnormalities, mostly pericardial effusions up to 9mm and late gadolinium enhancement. 3 of 4 cases with late gadolinium enhancement had a medical history of cardiomyopathy and findings were unlikely associated with SARS-CoV-2 infection. All of them had a medical history of art. hypertension, diabetes and/or hyperlipidemia. One patient with late gadolinium enhancement had no medical history of cardiomyopathy and his findings were likely associated with SARS-CoV-2-infection

### **Conclusion:**

This interim analysis of our ongoing study shows that 6 months after Covid-19 infection, 30% of hospitalized patients showed pathologic findings in cardiac MRI. By the end of the study we shall present more comprehensive information about findings in cardiac MRI.