282 Follow-up of hospitalized COVID-19 survivors: assessment of short- and long-term cardiovascular sequelae after SARS-CoV-2 infection

Lucia Ilaria Birtolo[1], Silvia Prosperi[1], Sara Monosilio[1], Sara Cimino[1], Domenico Filomena[1], Maria Alfarano[1], Giovanna Manzi[1], Matteo Neccia[1], Silvia Papa[1], Ilaria Passarelli[1], Francesca De Persis[1], Alessandra De Luca[1], Mariachiara Mei[1], Martina Di Iorio[1], Letizia D'Antoni[2], Gianluca Di Pietro[1], Santi Francavilla[1], Riccardo Improta[1], Serena Marcon[1], Marco Valerio Mariani[1], Gianluca Agnes[1], Agostino Piro[1], Massimiliano Rizzo[1], Edoardo Sebastian Rachele[1], Martina Straito[1], Marco Tocci[1], Marco Francone[3], Nicola Galea[4], Paolo Severino[1], Patrizia Pasculli[2], Maria Chiara Colaiacomo[5], Angelo Petroianni[6], Cristina Chimenti[1], Carlo Lavalle[1], Roberto Badagliacca[1], Paolo Palange[6], Claudio Mastroianni[2], Carlo Catalano[4], Francesco Pugliese[7], Maria Ciardi[2], Viviana Maestrini[1], Massimo Mancone[1], and Francesco Fedele[1]
[1]Department of Clinical, Internal, Anesthesiological and Cardiovascular Sciences, 'Policlinico Umberto I' Hospital, Sapienza University of Rome, Rome, Italy, [2]Department of Public Health and Infectious Diseases, 'Policlinico Umberto I' Hospital, Sapienza University of Rome, Rome, Italy, [3]Department of Biomedical Sciences, Humanitas University, Milan, Italy, [4]Department of Radiological, Oncological and Pathological Sciences, 'Policlinico Umberto I' Hospital, Sapienza University of Rome, Rome, Italy, [5]RadiologyDepartment, 'Policlinico Umberto I' Hospital, Sapienza University of Rome, Rome, Italy, [6]Department of Public Health and Infectious Diseases, Division of Pulmonary Medicine, 'Policlinico Umberto I' Hospital, Sapienza University of Rome, Rome, Italy, [7]Department of Anaesthesia and Intensive Care Medicine, 'Policlinico Umberto I' Hospital, Sapienza University of Rome, Rome, Italy, [8]Emergency Department, 'Policlinico Umberto I' Hospital, Rome, Italy, and [9]'Policlinico Umberto I' Hospital, Rome, Italy

Aims: Cardiovascular sequelae in COVID-19 survivors remain largely unclear and can potentially go unrecognized. Reports on follow-up focused on cardiovascular evaluation after hospital discharge are currently scarce. Aim of this prospective study was to assess cardiovascular sequelae in previously hospitalized COVID-19 survivors.
Methods and results: The study was conducted at 'Sapienza' University of Rome—Policlinico 'Umberto I'. After 2 months from discharge, $n = 230$ COVID-19 survivors underwent a follow-up visit at a dedicated 'post-COVID Outpatient Clinic'. A cardiovascular evaluation including electrocardiogram (ECG), Troponin and echocardiography was performed. Further tests were requested when clinically indicated. Medical history, symptoms, arterial-blood gas, blood tests, chest computed tomography, and treatment of both in-hospital and follow-up evaluation were recorded. A 1-year telephone follow-up was performed. A total of 36 (16%) COVID-19 survivors showed persistence or delayed onset of cardiovascular disease at 2-months follow-up visit. Persistent condition was recorded in 62% of survivors who experienced an in-hospital cardiovascular disease. Delayed cardiovascular involvement included: myocarditis, pericarditis, ventricular disfunction, new onset of systemic hypertension and arrhythmias. At 1-year telephone follow-up, 105 (45%) survivors reported persistent symptoms, with dyspnoea and fatigue being the most frequent. 60% of survivors showed persistent chest CT abnormalities and among those 28% complained of persistent cardiopulmonary symptoms at long term follow-up.
Conclusions: Our preliminary data showed persistent or delayed onset of cardiovascular involvement (16%) at short-term follow-up and persistent symptoms (45%) at long-term follow-up. These findings suggest the need for monitoring COVID-19 survivors.