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Preface

Arrhythmic and Vascular Complications of Coronavirus Disease 2019



Domenico G. Della Rocca, MD, PhD



Giovanni B. Forleo, MD, PhD



Andrea Natale, MD

Editors

The current coronavirus disease 2019 (COVID-19) pandemic has posed unprecedented challenges for society and health care systems. The outbreak has fueled a global, multidisciplinary research initiative aimed at disclosing the pathophysiologic bases, as well as identifying effective diagnostic and treatment strategies for this disease. This research effort has led to significant discoveries and culminated in the development of effective vaccines against the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

A large body of evidence has suggested that the protean clinical manifestations of SARS-CoV-2 may be explained by a complex pathophysiology, which includes impaired endothelial cell function and microcirculation. Specifically, endothelial activation and dysfunction may alter the integrity of blood vessels and contribute to a procoagulative state, thereby leading to a wide variety of clinical manifestations, which frequently involve the cardiovascular system.

As a result of the impressive numbers of COVID-19 patients requiring hospitalizations, enormous efforts were needed to ensure non-COVID-19 patients could safely and effectively access needed health care. While entire departments were converted to accommodate COVID-19 case surge, the need for new modalities of delivering health care services led to a widespread adoption of digital health solutions (eg, virtual visits, remote monitoring).

This issue of *Cardiac Electrophysiology Clinics* is focused on the prevalence, pathophysiology, diagnosis, and treatment of the arrhythmic and vascular complications of COVID-19.

The first section of six articles is an overview of most common cardiovascular complications of COVID-19. Specifically, articles by Magnocavallo and colleagues and Tarantino and colleagues focus on the prevalence, management, and outcomes of supraventricular and ventricular arrhythmias. The next article, by Paola Canale and colleagues, provides valuable insights into the pathophysiologic bases of SARS-CoV-2-mediated endothelial dysfunction and microvascular injury, which are then discussed (authored by Del Prete and colleagues, Massaro and colleagues, and Chimenti) as a background for specific cardiovascular manifestations (vascular complications, thromboembolism, myocarditis).

The second section of four articles (authored by Romero and colleagues, Barosi and colleagues, Nakou and colleagues, and Schiavone and colleagues) explores the main electrocardiographic and imaging features of COVID-19 and the role of electrocardiography to monitor the proarrhythmic effect of QT prolonging drugs to treat COVID-19.

The last section of this issue (articles authored by Pothineni and Santangeli, Mohanty and colleagues, Ahmed and colleagues, and Magnocavallo and colleagues) focuses on the importance

of universal testing strategies to promote workplace safety and on the impact of the pandemic on health care utilization for non-COVID-19 patients, with a spotlight on the widespread adoption of digital health technologies.

We are confident that this issue of *Cardiac Electrophysiology Clinics* will be very useful to health care providers across different specialties, and we wish to thank all the authors for their valuable contributions.

Domenico G. Della Rocca, MD, PhD
Texas Cardiac Arrhythmia Institute
St. David's Medical Center
3000 North IH-35, Suite 720
Austin, TX 78705, USA

Giovanni B. Forleo, MD, PhD
Department of Cardiology
Azienda Ospedaliera-
Universitaria "Luigi Sacco"
Via G.B Grassi, 74
20157 Milan, Italy

Andrea Natale, MD
Texas Cardiac Arrhythmia Institute
Center for Atrial Fibrillation at St. David's
Medical Center, 1015 E. 32nd Street, Suite 516
Austin, TX 78705, USA

E-mail addresses:

domenicodellarocca@hotmail.it (D.G. Della
Rocca)

forleo@me.com (G.B. Forleo)
dr.natale@gmail.com (A. Natale)