COVID-19 infection unmasking Brugada syndrome

The phenotype of Brugada syndrome is associated with a decrease in the sodium current and can manifest with sudden death in previously healthy individuals. Many triggers have been described, including fever, alcohol intake, and medications that cause sodium channel blockade. Coronavirus disease 2019 (COVID-19) most commonly presents with fever and a cough. In the emergency department, ST elevation prompted urgent echocardiography and coronary catheterization, which were normal. During overnight observation, the patient’s temperature spiked to 102°F, with electrocardiographic (ECG) changes consistent with a type 1 Brugada pattern, and he tested positive for COVID-19, prompting respiratory isolation. With defervescence, his ECG changes improved. He experienced no in-hospital arrhythmias. He was discharged home for quarantine, with a life vest and, once cleared from an infectious standpoint, consideration of an implantable cardioverter-defibrillator. Knowledge of the direct association with Brugada phenotype expression and syncope is helpful, particularly as the pandemic is studied across broad populations and in Brugada syndrome–prevalent regions.

An algorithm for managing QT prolongation in COVID-19 patients treated with either chloroquine or hydroxychloroquine in conjunction with azithromycin: Possible benefits of intravenous lidocaine

Pharmacological approaches to reduce morbidity and mortality with COVID-19 are actively being sought. In a small case series, a combination of azithromycin and hydroxychloroquine has shown to reduce detection of COVID-19 compared with hydroxychloroquine alone. Both drugs can prolong the QT interval and increase the risk of torsades de pointes (TdP). Mitra et al (doi: https://doi.org/10.1016/j.hrcr.2020.03.016) shared a case of a 66-year-old Bangladeshi man without a significant medical history who presented after an episode of syncope and fever. In the emergency department, ST elevation prompted urgent echocardiography and coronary catheterization, which were normal. During overnight observation, the patient’s temperature spiked to 102°F, with electrocardiographic (ECG) changes consistent with a type 1 Brugada pattern, and he tested positive for COVID-19, prompting respiratory isolation. With defervescence, his ECG changes improved. He experienced no in-hospital arrhythmias. He was discharged home for quarantine, with a life vest and, once cleared from an infectious standpoint, consideration of an implantable cardioverter-defibrillator. Knowledge of the direct association with Brugada phenotype expression and syncope is helpful, particularly as the pandemic is studied across broad populations and in Brugada syndrome–prevalent regions.

Address reprint requests and correspondence: Dr T. Jared Bunch, Division of Cardiovascular Medicine, Department of Internal Medicine, University of Utah School of Medicine, 30 N 1900 E, Room 4A100, Salt Lake City, UT 84132. E-mail address: jared.bunch@hsc.utah.edu.

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