Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Complex Clinical Cases

SARS-COV2 (COVID-19) UNMASKING BRUGADA PATTERN

Poster Contributions
Saturday, May 15, 2021, 1:15 p.m.-2:00 p.m.

Session Title: Complex Clinical Cases: MD/PhD 2
Abstract Category: MD/PhD: Coronavirus Disease (COVID-19)

Authors: *Sanchit Chawla, Saira Afzal, Hassan Mehmood Lak, Anjli Maroo, Cleveland Clinc, Cleveland, OH, USA*

Background: Brugada syndrome (BS) is a rare disease; associated with a high incidence of sudden cardiac death in patients with no prior structural heart disease. We describe a case of fever-induced type 1 Brugada pattern in a patient with SARS-CoV2 (COVID-19).

Case: A 72 year old female with chronic obstructive pulmonary disease presented with cough, fever to 100.4 F, and chest tightness. Troponin T <0.010 ng/mL. Electrocardiography showed coved ST-elevation V1-V4 with terminal T wave inversion. Cardiac catheterization showed normal coronary arteries. Nasal swab for SARS-CoV2 was positive. Two hours after presentation, ECG showed complete resolution. The patient became afebrile and had no recurrent ST changes. Her COVID-19 infection was treated with dexamethasone and remdesivir.

Decision-making: The initial ECG was interpreted as type 1 Brugada pattern (BT). Electrophysiology consultant determined that the lack of personal or family history of clinical ventricular arrhythmic events was consistent with BT, rather than BS. The patient was observed closely for recurrent fever, and she was maintained on telemetry. Defibrillator therapy was not recommended.

Conclusion: BT can be unmasked during COVID-19 infection. Patients with BT should be screened for Brugada syndrome since it has a class 1 indication for consideration of implantable cardiac defibrillator. Fevers should be treated aggressively and cardiac telemonitoring devices may be useful after discharge until fevers resolve.

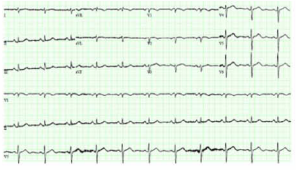

Figure 1: Twelve-lead ECG tracing of the patient. Sinus rhythm with no acute ST-segment changes.

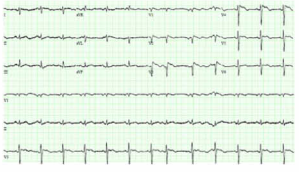

Figure 2: ECG on admission significant Type 1, characterized by coved ST-segment elevation ≥2 mm (0.2 mV) followed by a negative T wave in V2 – V4.

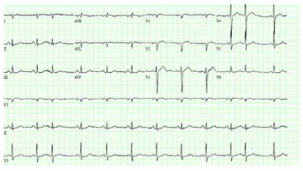

Figure 3: 12 Lead ECG after left heart catherization proecudure with no ST-segment or T wave changes.

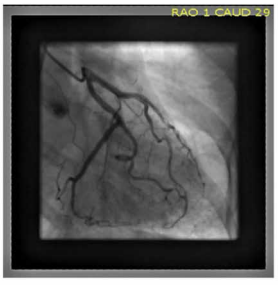

Figure 4: Left Anterior Oblique cardiac catherization view showing no significant coronary artery disease.

Figure 5: Right Anterior Oblique cardiac catherization view showing no significant coronary artery disease