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.

4. Arbelo E, Angera I, Trucco E, Rivas-Gándara N, Guerra JM, Bisbal F, Jáuregui-Abularach M, Vallés E, Martin G, Sbraga F, Tolosana JM, Linhart M, Francisco-Pascual J, Montiel-Serrano J, Pereferrer D, Menéndez-Ramírez D, Jiménez J, Elamrani A, Borrás R, Dallaglio PD, Benito E, Santos-Ortega A, Rodríguez-Font E, Sarrias A, González-Matos CE, Martí-Almor J, Cabrera S, Mont L. Reduction in new cardiac electronic device implantations in Catalonia during COVID-19. *Europace* 2021;23:456–463.
5. Bechlioulis A, Sfairopoulos D, Korantzopoulos P. Impact of COVID-19 pandemic on cardiac electronic device implantations in Northwestern Greece. *Am J Cardiovasc Dis* 2021;11:489–493.
6. Shahabi J, Askari M, Azhari A, Kermani-Alghoraishi M. The survey of electrophysiology lab activity during the COVID-19 pandemic. *J Arrhythm* 2021;37:899–903.
7. Pescariu SA, Tudoran C, Pop GN, Pescariu S, Timar RZ, Tudoran M. Impact of COVID-19 pandemic on the implantation of intra-cardiac devices in diabetic and non-diabetic patients in the western of Romania. *Medicina (Kaunas)* 2021;57:441.
8. Fileti L, Vecchio S, Moretti C, Reggi A, Aquilina M, Balducelli M, Santarelli A, Grosseto D, Piovaccari G, Rubboli A. Impact of the COVID-19 pandemic on coronary invasive procedures at two Italian high-volume referral centers. *J Cardiovasc Med (Hagerstown)* 2020;21:869–873.
9. Metzler B, Siostrzonek P, Binder RK, Bauer A, Reinstadler SJ. Decline of acute coronary syndrome admissions in Austria since the outbreak of COVID-19: the pandemic response causes cardiac collateral damage. *Eur Heart J* 2020;41:1852–1853.
10. Tam CF, Cheung KS, Lam S, Wong A, Yung A, Sze M, Lam YM, Chan C, Tsang TC, Tsui M, Tse HF, Siu CW. Impact of coronavirus disease 2019 (COVID-19) outbreak on ST-segment-elevation myocardial infarction care in Hong Kong, China. *Circ Cardiovasc Qual Outcomes* 2020;13:e006631.
11. Garcia S, Albaghdadi MS, Meraj PM, Schmidt C, Garberich R, Jaffer FA, Dixon S, Rade JJ, Tannenbaum M, Chambers J, Huang PP, Henry TD. Reduction in ST-segment elevation cardiac catheterization laboratory activations in the United States during COVID-19 pandemic. *J Am Coll Cardiol* 2020;75:2871–2872.
12. Rodríguez-Leor O, Álvarez BC, Ojeda S, Moreiras JM, Cuevas JR, Palop RL, Frutos AM, Cequier Á, Torres RR, González IC, de Prado AP. Impacto de la pandemia de COVID-19 sobre la actividad asistencial en cardiología intervencionista en España. *REC Interv Cardiol* 2020;2:82–89.
13. O'Shea CJ, Thomas G, Middeldorp ME, Harper C, Elliott AD, Ray N, Lau DH, Campbell K, Sanders P. Ventricular arrhythmia burden during the coronavirus disease 2019 (COVID-19) pandemic. *Eur Heart J* 2021;42:520–528.
14. Adabag S, Zimmerman P, Black A, Madjid M, Safavi-Naeini P, Cheng A. Implantable cardioverter-defibrillator shocks during COVID-19 outbreak. *J Am Heart Assoc* 2021;10:e019708.

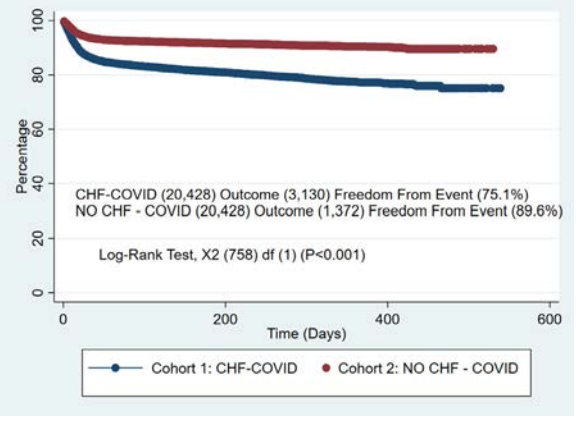
https://doi.org/10.1016/j.amjcard.2021.10.006

Effect of SARS-COV-2 Diagnosis on Individuals with Preexisting Chronic Heart Failure

The effect of SARS-COV-2 diagnosis on individuals with pre-existing chronic heart failure long-term outcomes is still poorly understood. The researchers aimed to determine whether there exists a difference in all-cause mortality between patients with a SARS-COV-2 diagnosis that received a pre-existing chronic heart failure diagnosis compared with those that did not have a diagnosis of chronic heart failure that contracted SARS-COV-2. Established research has connected poor outcomes to the previous history of heart failure.[1]

The researchers queried the Trinetx (Covid-19 Research Network) which is composed of 63 health care organizations. They analyzed the data from January 20, 2020, to June 1, 2021, and identified n = 508,524 cases between the ages of 18 and 90 years with n = 21,274 with a previous history of heart failure which was defined using the International Statistical Classification of Diseases, Tenth Revision (ICD) 10 Code I50 and n = 487,240 patients with no previous diagnosis of heart failure. Descriptive statistics were used to measure the association between the 2 groups. A propensity score matching of a 1:1 was performed to match on the covariates (age, male, female, White, Black, Hispanic, hypertension, diabetes, coronary artery disease, chronic obstructive pulmonary disease, personal history of smoking, personal history of alcohol dependence, body mass index). The researchers were able to well match n = 20,428 of 20,428 over 550 days.

The researchers identified n = 508,514 patients aged 18 to 90 with differing ages between the 2 groups with chronic heart failure with average of (68.5 ± 13.8 vs 47.7 ± 17.9 p <0.001) compared to the group without chronic heart failure. The chronic heart failure group were more males (54.1% vs 44.5%, p <0.001) White (60.4% vs 54.9%, p <0.001), Black (21.7% vs 13%, p <0.001), hypertension (77.8% vs 24.2%, p <0.001) diabetes (50.7% vs 11.8%, p <0.001), coronary artery disease (44.4% vs 4%, p <0.001), personal history of smoking (24.0% vs 6%, p <0.001), personal history of alcohol dependence (3.4% vs 1.0%, p <0.001), body mass index (32.1 ± 8.37 vs 30.7 ± 7.45, p <0.001). Patients in the chronic heart failure group had a higher mortality of (15.3% vs 6.7%, p <0.001) A log-rank test also illustrated that those with a chronic heart failure diagnosis had a lower survival rate of (75.1% vs 89.6%, p <0.001) with a confirmed hazard of (2.73, p = 0.02).



Disclosures

The authors have no conflicts of interest to declare.

Frank H. Annie, PhD[a]
Sahil Dave[a]
Syed Muhammad, MD[b]
Aravinda Nanjundappa, MD[b]
[a] Charleston Area Medical Center, Health Education and Research Institute, Charleston, West Virginia
[b] Charleston Area Medical Center, Vascular Center of Excellence, Charleston Area Medical Center, Charleston, West Virginia.
27 September 2021
8 October 2021

1. Yonas E, Alwi I, Pranata R, Huang I, Lim MA, Gutierrez EJ, Yamin M, Siswanto BB, Virani SS. Effect of heart failure on the outcome of COVID-19 - A meta analysis and systematic review. *Am J Emerg Med* 2021;46:204–211. https://doi.org/10.1016/j.ajem.2020.07.009. Accessed on August 16, 2021.

https://doi.org/10.1016/j.amjcard.2021.10.007

Prognostic Value of Electrophysiologic Study in Drug-Induced Brugada Syndrome: Caution is Always a Must

We have recently read with great interest the article by Iacopino et al[1] describing the role of dST-Tiso interval >300 milliseconds as a predictor of ventricular arrhythmias (VAs) inducibility at electrophysiologic study in patients with drug-induced Brugada syndrome (BrS).

In their study population, the authors reported a VAs inducibility of 32.9%, lower than that (13.2%) reported by Sieira et al,[2] and similar to that (37.6%) reported by Russo et al.[3] These differences may be potentially related to the heterogeneity in patients' clinical characteristics, in anesthetic and programmed ventricular stimulation (PVS) protocols, and in the definition of VAs inducibility.

Based on the available data, the usefulness of the electrophysiologic study for sudden cardiac risk stratification of BrS patients with remains controversial, especially in those with drug-induced BrS.[4,5]

Recently, the Italian Brugada Syndrome (IBRYD) study, a multicenter Italian study including 226 patients with drug-induced BrS who underwent PVS, showed that the VAs inducibility-was not predictive of arrhythmic events in implantable cardioverter-defibrillator (ICD) recipients versus non-ICD patients and symptomatic versus asymptomatic subgroups.[3]

Moreover, asymptomatic drug-induced patients with BrS are characterized by a low intrinsic risk; in such patients, the PVS may not be warranted considering its low positive predictive value, the low likelihood of cardiac arrest, and the lack of strong indications to ICD implantation in primary prevention.[6]

Analyzing the data showed by Iacopino et al,[1] we noticed a significantly prolonged PR interval duration among patients with BrS with VAs inducibility compared with others. How do authors explain this data? Could it be the marker of latent cardiac conduction system disease unmasked by ajmaline administration? Or could it be related to a potential selection bias of their study cohort?

In conclusion, we suggest exercising adequate caution in case of VAs inducibility in drug-induced BrS patients, because the decision to implant ICD should not be based exclusively on the PVS findings. Moreover, we think that the future efforts of researchers should be oriented to collect prospective long-term follow-up data of asymptomatic drug-induced patients with BrS, to identify independent predictors of life-threatening VAs, and to select those in real need of ICD in primary prevention.

Disclosures

The authors have no conflicts of interest to declare.

Gregory Dendramis, MD[a]
Antonio D'Onofrio, MD[b]
Vincenzo Russo, MD, PhD[c]
[a] Cardiology Unit, Civico Hospital, Palermo, Italy
[b] Division of Cardiology, Monaldi Hospital, Naples, Italy
[c] Department of Medical Translational Sciences, University of Campania "Luigi Vanvitelli", Naples, Italy
2 October 2021

1. Iacopino S, Chierchia GB, Sorrenti P, Pesce F, Colella J, Fabiano G, Campagna G, Petretta A, Placentino F, Filannino P, Artale P, Giacopelli D, Santarpino G, Sorgente A, Brugada P, de Asmundis C. dST-Tiso interval, a novel electrocardiographic marker of ventricular arrhythmia inducibility in individuals with ajmaline-induced Brugada type I pattern. *Am J Cardiol* 2021;159:94–99.
2. Sieira J, Ciconte G, Conte G, de Asmundis C, Chierchia GB, Baltogiannis G, Di Giovanni G, Saitoh Y, Casado-Arroyo R, Juliá J, La Meir M, Wellens F, Wauters K, Pappaert G, Brugada P. Long-term prognosis of drug-induced Brugada syndrome. *Heart Rhythm* 2017;14:1427–1433.
3. Russo V, Pafundi PC, Caturano A, Dendramis G, Ghidini AO, Santobuono VE, Sciarra L, Notarstefano P, Rucco MA, Attena E, Floris R, Romeo E, Sarubbi B, Nigro G, D'Onofrio A, Calò L, Nesti M. Electrophysiological study prognostic value and long-term outcome in drug-induced type 1 Brugada syndrome: the IBRYD study. *JACC Clin Electrophysiol* 2021;7:1264–1273.
4. Okamura H, Kamakura T, Morita H, Tokioka K, Nakajima I, Wada M, Ishibashi K, Miyamoto K, Noda T, Aiba T, Nishii N, Nagase S, Shimizu W, Yasuda S, Ogawa H, Kamakura S, Ito H, Ohe T, Kusano KF. Risk stratification in patients with Brugada syndrome without previous cardiac arrest − prognostic value of combined risk factors. *Circ J* 2015;79:310–317.
5. Delise P, Probst V, Allocca G, Sitta N, Sciarra L, Brugada J, Kamakura S, Takagi M, Giustetto C, Calò L. Clinical outcome of patients with the Brugada type 1 electrocardiogram without prophylactic implantable cardioverter-defibrillator in primary prevention: a cumulative analysis of seven large prospective studies. *Europace* 2018;20:f77–f85.
6. Sroubek J, Probst V, Mazzanti A, Delise P, Hevia JC, Ohkubo K, Zorzi A, Champagne J, Kostopoulou A, Yin X, Napolitano C, Milan DJ, Wilde A, Sacher F, Borggrefe M, Ellinor PT, Theodorakis G, Nault I, Corrado D, Watanabe I, Antzelevitch C, Allocca G, Priori SG, Lubitz SA. Programmed ventricular stimulation for risk stratification in the Brugada syndrome: a pooled analysis. *Circulation* 2016;133:622–630.

https://doi.org/10.1016/j.amjcard.2021.10.015