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Letters to the editor

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Watch the P wave in COVID-19 patients: the interatrial block

Vincenzo Russo[a], Marco Marano[b] and Gerardo Nigro[a]

[a]University of Campania 'Luigi Vanvitelli', Department of Medical Translational Sciences, Cardiology Unit, Monaldi Hospital, Naples and [b]Hemodialysis Unit, Maria Rosaria Clinic, Pompeii, Italy

Correspondence to Vincenzo Russo, MD, PhD, Universita degli Studi della Campania Luigi Vanvitelli, Napoli, Italy
E-mail: v.p.russo@libero.it

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To the Editor

We read with great interest the article by Yenercağ *et al.*[1] about the evaluation of P wave dispersion in patients with newly diagnosis coronavirus disease 2019 (COVID-19). The authors showed that P wave duration (PWD) and dispersion (PD) were longer in COVID-19 patients compared with controls and in particular in those with incident atrial fibrillation. The reported values of maximum PWD among COVID-19 patients with and without AF were 120.7 ± 8.3 and 110.2 ± 14.2 ms, respectively. It should be noted that among the two groups, the careful analysis of the P wave morphology could offer the authors the opportunity to describe the prevalence and prognostic role of the interatrial block (IAB) among their study population. IAB is a well described, but poorly recognized, cardiac rhythm disorder caused by delayed conduction across the Bachmann's region that is located between the right and left atrium,[2] resulting in a prolonged PWD ($\geq$120 ms) with (advanced IAB) or without (partial IAB) biphasic morphology ($\pm$) in the electrocardiographic inferior leads.[3]

IAB is a predictor of significant atrial arrhythmias, particularly atrial fibrillation,[4] as well as embolic stroke,[5] and all-cause and cardiovascular mortality.[6] Incident sustained tachyarrhythmias represent a not rare complication of COVID-19 and, among them, AF is the more frequent.[7] The genesis pathogenesis of arrhythmias in the clinical context of COVID-19 seems to be multifactorial; if on one hand, the direct effect of SARS-CoV-2 on myocardiocytes may lead to myocardial inflammation predisposing *per se* to cells electrical instability, ischemia from coronary microvascular disease, gap junction dysfunction, and abnormal calcium handling; on the other hand, the risk of arrhythmia may increase as the severity of the systemic inflammatory response, which determines an imbalance in autonomic tone, hypoxia, metabolic disarray, and significant electrolyte disturbances, leading instability of underlying chronic cardiovascular diseases.[8]

From this perspective, the advanced IAB may reflect the existence of an atrial myopathy due to an increased inflammatory substrate favoring, and then amplified by, COVID-19 and leading to AF onset and worsening the patients' clinical condition.[9]

During the COVID-19 pandemic, the electrocardiographic evaluation remains the simplest assessment for myocardial involvement in patients admitted to the emergency department and it may improve, combined with vital signs, the early prognostication of COVID-19 patients.[10] In this clinical context, the diagnosis of advanced IAB might stratify a subgroup of COVID-19 patients who need more careful monitoring and early pharmacological treatment. Further studies should be performed to confirm the prognostic role of IAB in this clinical setting.

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Conflicts of interest

There are no conflicts of interest.

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