Letter to the Editor — Editöre Mektup

Comparison of clinical features and conventional echocardiographic characteristics of patients with heart failure with mid-range ejection fraction with and without interatrial block

Dear Editor,

I read the article titled "Comparison of clinical features and conventional echocardiographic characteristics of patients with heart failure with mid-range ejection fraction with and without interatrial block" by Doğduş et al.[1] with great interest. It is well known that concomitant atrial fibrillation (AF) and heart failure in patients is associated with older age and increased number of comorbidities.[2] An interatrial block (IAB) is a finding distinguished by conduction disturbances between atria and a P-wave duration of more than 120 ms on the surface electrocardiogram (ECG). There are 2 forms of IABs that are defined according to the surface ECG findings. Partial IAB is diagnosed with only a prolonged P-wave duration (>120 ms), whereas the diagnosis of advanced IAB is made when there is biphasic P-wave morphology in the inferior leads (II, III, and aVF) in addition to the prolongation of the P wave.[3] It has been reported that IAB detected on surface ECG may be a predictor of AF development. However, in clinical practice, partial IAB is more common and has a more benign course, whereas advanced IAB is less common and associated with the development of AF.[4,5] The presence of neurological complications that may accompany IAB is defined as Bayés syndrome. If Bayés syndrome is detected in patients presenting with ischemic cerebrovascular events and sinus rhythm, more detailed research is recommended for the detection of paroxysmal AF. Moreover, it has been reported that initiating early anticoagulation treatment may be considered in these patients.[6] New-onset AF was found more frequently in patients with heart failure with reduced ejection fraction with advanced IAB.[7]

Doğduş et al.[1] reported higher number of comorbidities such as older age, more frequent New York Heart Association (NYHA) class III/IV heart failure, and hypertension/diabetes mellitus in patients with heart failure with mid-range ejection fraction (HFmrEF) with IAB. In addition, a history of ischemic cerebrovascular events was more common in patients with IAB in the study group. In the group with IAB, left atrium (LA) diameter and LA volume were higher. Although the authors defined partial and advanced IAB in the Methods section, they have not discussed the statistical analysis of the clinical results of partial/advanced IAB. Certainly, advanced IAB describes a less common and a more complicated picture. In the study population, it was observed that the number of patients with advanced IAB was 34, and constituted 13.9% of the patients with IAB.[1] The low number of patients with advanced IAB may have led to the inability to compare partial/advanced IAB in statistical analysis. The difference between patients' clinical variables with and without IAB may be due to those with advanced IAB. However, comparing partial and advanced IAB detected on surface ECG in larger HFmrEF patient population in terms of demographic characteristics, NYHA classification, and presence of paroxysmal AF will have interesting results.

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Author's reply

Dear Editor,

We would like to thank the reader for showing interest in our article titled "Comparison of Clinical features and conventional echocardiographic characteristics of patients with heart failure with mid-range ejection fraction with and without interatrial block" and suggesting valuable comments. As reported, heart failure (HF) with mid-range ejection fraction (HFmrEF) is a relatively new entity introduced by the European Society of Cardiology in 2016 in an attempt to address the "transition zone" issue for patients with HF and left ventricular ejection fraction between 40% and 49%.[1] HF and atrial fibrillation (AF) are the leading causes of mortality and ischemic stroke. Because AF and HF share common risk factors, they frequently coexist, and patients with both AF and HF have a worse prognosis than those with either of these conditions alone.[2] Interatrial block (IAB) is known to be associated with AF, thromboembolic ischemic stroke, and increased cardiovascular mortality.[3] Although there are several studies evaluating the association between AF and HFmrEF, we could not find any study investigating the clinical importance of the presence of IAB in patients with HFmrEF. In our study, we aimed to evaluate clinical and echocardiographic characteristics of patients with HFmrEF with and without IAB.[4]

As the reader emphasized, we had reported more comorbidities such as older age, more frequent New York Heart Association (NYHA) class III/IV HF, and hypertension/diabetes mellitus in patients with HFmrEF with IAB.[4] In addition, we established that the history of ischemic cerebrovascular events was more common in patients with IAB.[4] As the reader pointed out, we did not subdivide the study population as partial IAB/advanced IAB because there were fewer patients with advanced IAB in the study population. We agree with the reader's opinion that comparing partial and advanced IAB detected on surface ECG in larger HFmrEF patient population in terms of demographic characteristics, NYHA classification, and presence of paroxysmal AF will have interesting results. Irrespective of whether the IAB is partial or advanced, it may be utilized to identify high-risk HFmrEF patients and guide follow-up and will be helpful in consideration of early anticoagulation treatment.

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