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Letter to the Editor

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Author's Reply to Clinical Implication of New-Onset Atrial Fibrillation in the Individuals With Cardiac Implantable Electronic Devices

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▸ See the letter "Clinical Implication of New-Onset Atrial Fibrillation in the Individuals With Cardiac Implantable Electronic Devices" in volume 54 on page 156.

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Dear Editor,

We would like to thank Kataoka and Imamura[1] for their interest in our paper.[2] Our study demonstrated that a substantial proportion of patients implanted with the cardiac implanted electronic device (CIED) developed incident atrial fibrillation (AF), and incident AF was associated with a higher risk of major adverse cardiovascular events in this population. Kataoka and Imamura[1] raised four issues regarding our paper.

The first issue raised was the suggestion to separate patients with pacemaker implantation into two groups: those with conduction disturbances and those without, in order to analyze the risk of AF and the clinical impact of AF in each group. We agree with the authors on this point. In Figure 2, we have already presented the risk of AF, comparing patients with sick sinus syndrome and atrioventricular block. Our findings indicate that patients with sick sinus syndrome have a 2.5-fold higher risk of AF compared to those with atrioventricular block. This result is consistent with previous research and is particularly relevant when considering the association between atrial cardiomyopathy and sick sinus syndrome, even after adjusting for the higher average age of patients with sick sinus syndrome.[3] However, there is limited evidence regarding the clinical impact of AF based on accompanying conduction disturbances. Therefore, further studies will be necessary to address this matter.

The second and third issues raised were related to the analysis of AF risk based on the type of valve pathology and the inclusion of left ventricular ejection fraction data. In this study, we classified patients with mitral valve stenosis or prosthetic valves under the category of valvular heart disease. However, it is worth noting that AF risk may differ depending on the specific valve pathology, as previous studies have reported.[4] Some limitations of this study include the inability to accurately determine the exact location and severity of valve disease solely based on diagnosis, as opposed to using echocardiography data. Additionally, the study was unable to incorporate ejection fraction information due to the lack of available echocardiography data.

Conflict of Interest
The authors have no financial conflicts of interest.

Data Sharing Statement
The data required to reproduce these findings cannot be shared as this is a reply of the letter to the editor article.

Author Contributions
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The final issue addresses the appropriateness of considering catheter ablation as a means to reduce the clinically hazardous effect of incident AF in patients with CIED. Recent reports have demonstrated that early rhythm control can reduce major adverse cardiovascular events in AF patients, but those with CIEDs, such as pacemakers, were not adequately represented.[5] Further studies are required to determine if early rhythm control, which includes antiarrhythmic drugs and catheter ablation, can effectively decrease the risk of worse outcomes in AF patients with pacemakers.

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