We thank Dr. Finsterer for his several important suggestions, each of which contains an important issue regarding the pathophysiology of isolated non-compaction of ventricular myocardium (INVM). However, regrettfully, in this limited space we are unable to answer the many questions presented, most of which are beyond the scope of our study in which we aimed primarily to characterize the ECG abnormalities in Japanese patients with INVM. However, we agree with the main intent of the letter, which refers to 2 important problems: definition of the disease and ethnic differences.

Echocardiography (UCG) is, at present, considered the reference standard for the diagnosis of INVM and we used the proposal by Oechslin et al. as the definition of INVM when screening with UCG: (1) absence of coexisting cardiac abnormalities, (2) bilayers structure with a maximal end-systolic ratio of the noncompacted to compacted layers >2, and (3) color Doppler evidence of deep perfused intertrabecular recesses. For the best visual differentiation of the characteristic 2-layered structure consisting of a thin, compacted outer (epicardial) layer and a much thicker, noncompacted inner (endocardial) layer, the parasternal short-axis view at end-systole was used. An important differential diagnostic issue is the presence of prominent trabeculations as a common variant of normal hearts. Therefore, we awarded another point for the second criterion, and in cases of poor image quality, we did not include the patient in the study population with INVM. Using these procedures, we believe that the diagnosis of INVM in the present study is correct, as long as it is based on UCG findings.

It should be also noted that, in an image-based diagnosis, improvement in the image resolution and the skill of the operator affects accuracy, which would be the case for INVM. The improving technology of UCG could more easily reveal some INVM patients who might have been previously overlooked. Consequently, the prevalence and characteristics of INVM patients are dependent on the imaging technology. In other words, the whole story of INVM still remains unclear, and we believe that our study assists in understanding the pathophysiology of INVM.

References

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