To the Editor:
We read with great interest the paper by Nakanishi et al entitled “Impaired coronary flow reserve as a marker of microvascular dysfunction to predict long-term cardiovascular outcomes, acute coronary syndrome and the development of heart failure”. The authors demonstrate that coronary flow reserve (CFR) is a significant and independent determinant of long-term cardiovascular events, acute coronary syndrome events and heart failure in patients with coronary artery disease. The study is interesting, but we think that some additional comments on the prognostic value of CFR are necessary.

CFR can be assessed by echocardiography, both transoesophageal and transthoracic in approach. Despite the original description of echocardiographic CFR assessment being related to transoesophageal echocardiography (TEE), this methodology is semi-invasive and not patient-friendly. However, very long-term follow-up results in specific patient groups are now available with this method. Recently, results of a 9–10-year follow-up study named SZEGED Study (SummariZation of long-tErm prognostic siGnificance of coronary flow rEserve in special Disorders) were published. The prognostic impact of TEE-derived CFR has been demonstrated in patients with hypertrophic cardiomyopathy, aortic stenosis, significant coronary artery disease not involving the left anterior descending coronary artery, in subjects without significant left anterior descending coronary artery stenosis and in females with normal epicardial coronary arteries. Results of these studies highlight the fact that reduced CFR is a significant and independent predictor of future cardiovascular events and is associated with less favourable outcome, regardless of the presence or absence of macrovascular coronary artery disease. Moreover, it has prognostic significance in hypertrophic cardiomyopathy and aortic stenosis as well.

We hope that echocardiography-derived CFR assessment will find its optimal place in cardiological diagnostics, partly based on these findings. Confirmation of these results by transthoracic echocardiography is warranted.

References

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