Heart Failure With Preserved Ejection Fraction: Is it Due to Contractile Dysfunction?: Reply

We thank Dr MacIver for his interest in our review article! There remain many issues to be resolved about the pathophysiology of heart failure with preserved ejection fraction (HFPEF), one of which is whether left ventricular (LV) systolic function is impaired or not. As Dr MacIver, and we, described, HFPEF is associated with LV systolic dysfunction in some patients, and we also agree with Dr MacIver’s comment that preserved EF does not necessarily indicate normal systolic function! However, it is not sufficient only to reveal abnormalities in HFPEF. We, cardiologists, have to consider which abnormalities play crucial roles in the development of HFPEF. For example, 25% stenosis of the coronary artery is “abnormal”, but this region is not a target of revascularization in patients with coronary artery disease. In contrast to heart failure patients with reduced EF, it is very rare that low output syndrome emerges as a principal pathophysiology in patients with HFPEF. The patients with HFPEF usually represent congestion without a significant reduction of cardiac output (wet-warm), not congestion with reduced output (wet-cold), at the hospitalization for the worsening of heart failure! A recent clinical study demonstrated that abnormality of LV diastolic function was associated with exercise intolerance in subjects with preserved EF, and that the difference in EF was not related to exercise capacity! Therefore, one of the principal pathogenetic factors of HFPEF is likely diastolic dysfunction based on LV concentric geometry, which is associated with the incapability of LV dilatation and leads to the rapid increase in LV filling pressure during exercise. Our and other clinical studies have raised anemia, vascular stiffness and renal dysfunction as other pathogenetic factors! Currently, the clinical role of systolic dysfunction remains unclear in this type of heart failure.

References

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