Recent Progress and Next Challenges in the Treatment of Symptomatic Heart Failure in Japan
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Chronic heart failure (CHF) remains a major cause of mortality and morbidity in the Western and developed countries, while developing countries in Asia are also in the process of the epidemiologic transition (ie, an etiological shift from infectious diseases and nutritional deficiencies to lifestyle-related diseases including cardiovascular diseases). Thus, CHF has become a major public health concern with increasing incidence and prevalence worldwide. Japan has become the leading country for longevity mainly via improvements in public health, advances of medicine and a unique dietary culture. However, modernization and westernization of the Japanese diet has recently changed the epidemiologic trend, especially a marked increase in lifestyle-related diseases, subsequent cardiovascular diseases and CHF. On the other hand, recent widespread use of evidence-based medications in the treatment of cardiovascular diseases is thought to have modified the recent trends in the epidemiology of CHF in Japan.

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In this issue of the Journal, Ushigome et al investigate the recent trend in patients with symptomatic HF (stage C/D) in Japan and described a definite alternation. One of the major and important findings in this report is the improved long-term prognosis in symptomatic CHF patients from the recent widespread use of evidence-based therapy. At the same time, the report also reveals the increased prevalence of lifestyle-related diseases (hypertension, dyslipidemia, diabetes mellitus, and obesity), ischemic etiology, and HF with preserved ejection fraction (HFpEF). We can recognize that recent epidemiological trends in patients with symptomatic HF in Japan are being affected by multiple complex and diverse factors: westernization of diet, marked increase in lifestyle-related diseases and ischemic heart diseases, advances in medical and surgical treatment, and aging of society. In the United States, the incidence of HF approaches 10 per 1,000 population after 65 years of age and the prevalence of HF is expected to increase 46% from 2012 to 2030. The prevalence of ischemic HF in Japan has already reached the levels in Western countries. In addition, Japan has already entered an era of the aging/super-aging society. Accordingly, it is expected that the number of geriatric HF patients will rapidly and continuously increase in Japan in the foreseeable future, because lifestyle-related diseases, ischemic heart disease and older age are risk factors for HF.

This report elucidates what needs to be done next (Figure). First of all, the reduction of ischemic events is important. The incidence of ischemic HF can be reduced by implementing existing preventive approaches to lifestyle-associated diseases. Secondly, further improvement in the use of existing evidence-based medications for HF treatment is also important, which can prevent disease progression. Thirdly, it is also crucial to develop a strategy against the increased prevalence of HFpEF. Although no medicines have been proved to have beneficial effects on HFpEF according to prospective randomized clinical study so far, recent observational studies showed a poten-
tial benefit of the use of statins for the treatment of HFpEF. In addition, standard-dose β-blocker may reduce the incidence of cardiovascular events in HFpEF patients with advanced diastolic dysfunction. By performing randomized controlled trials, effective and evidence-based strategies for the treatment of HFpEF should be established in the near future. Finally, it is an urgent issue to strengthen measures against the increasing number of geriatric HF patients. Most HF patients will experience worsening symptoms and develop a refractory terminal phase of HF, at which time advanced therapies such as mechanical circulatory support are considered. However, the prognosis is determined also by complicating conditions such as comorbidities, malnutrition, declined physiological and physical functional abilities, mental status (dementia or depression), and support from a spouse/partner, especially in geriatric patients with HF. Although the application of advanced therapies such as mechanical circulatory support may increase as the technology improves, it is obvious that advanced therapies are inappropriate for the majority of HFpEF or geriatric HF patients. The economic burden associated with HF, which is expected to increase with the super-aging society, should be also considered seriously. In addition, most geriatric patients with symptomatic HF require nursing care. Accordingly, the development of medical and social support systems, including home nursing visits, cardiac rehabilitation, and palliative care is important to maintain quality of life and reduce unplanned readmissions, especially in geriatric HF patients.

In summary, the prognosis of symptomatic HF patients has been improved by widespread use of evidence-based treatment in Japan. However, the number of HF patients is expected to continue increasing rapidly in the future. Thus, we have to become truly committed to reducing the prevalence of lifestyle-associated diseases and ischemic events, to develop an effective standard therapy for HFpEF, and to establish comprehensive strategies for dealing with the rapidly increasing number of geriatric patients with HF. Japan is facing the super-aged society before the rest of the westernized nations. The issues discussed here will become major public health problems in other nations in the future. Accordingly, to solve these issues is a big mission and important duty assigned to cardiologists in Japan.

References