New therapy approach in heart failure with preserved ejection fraction based on new pathophysiological concept

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According to the ejection fraction (EF) patients with heart failure may be divided into two different groups: heart failure with preserved (HFpEF) or reduced (HFrEF) ejection fraction. In recent years, accumulating studies showed that increased mortality and morbidity rates of these two groups are nearly equal. More importantly, despite decline in mortality after treatment in regard to current guideline in patients with heart failure with reduced ejection fraction, there are still no trials resulting in improved outcome in patients with heart failure with preserved ejection fraction so far. Thus, novel pathophysiological mechanisms are under development, and other new viewpoints, such as multiple comorbidities resulting in increased non-cardiac deaths in patients with heart failure and preserved ejection fraction, and forearm hyperemic responses were presented recently. Finally, proinflammatory cytokines are increased in HFPEF and predict future HFPEF development. In this review, new pathophisiological mechanisms, and clinical trials are reviewed, along with a discussion of novel treatment strategies that are currently under investigation or hold promise for the future.

Key Words: heart failure, preserved ejection fraction, pathophysiology, treatment.