Review Article — Special issue: Heart Failure

Natriuretic peptides in heart failure
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Abstract

The worldwide incidence of heart failure is steadily increasing over the past several decades, partly due to population aging and improved survival of patients with cardiovascular diseases. Therefore the importance of biochemical substances raises which would uncover ongoing cardiac overload, enable the treatment monitoring and make care of the patients with heart failure more effective. According to the results of many clinical trials, this task is fulfilled at most by natriuretic peptides which become gradually a part of standard clinical practice. Both, brain natriuretic peptide and its N-terminal propeptide help to detect heart failure in patients presenting with acute dyspnoea. Moreover, the natriuretic peptide levels reflect the severity of the disease and can predict future clinical outcomes in the heart failure patients. The role of natriuretic peptides as an objective target for heart failure therapy in the outpatient care was not so well established.

The human recombinant brain natriuretic peptide nesiritide was approved in the United States as a new therapeutic agent for acute heart failure. Although the first results were promising, questions regarding nephrotoxicity and possible higher mortality connected with this substance avoided its broader therapeutic use to date.

Keywords

Biological markers; Heart failure; Natriuretic peptides; BNP; NT-proBNP; Dyspnea