Prognostic potential of ST2 in patients with chronic heart failure

Valentina Mitic[1] , Dijana Stojanovic[2] , Marina Deljanin Ilic [1,3], Dejan Petrovic [1,3]

[1] Institute for Treatment and Rehabilitation "Niska Banja", Niška Banja, Serbia, [2]Institute of Pathophysiology, Faculty of Medicine, University of Nis, Serbia, [3] Department of Internal Medicine, Faculty of Medicine, University of Nis, Serbia

Heart failure is a complex clinical syndrome with underlying structural and/or cardiac dysfunction, with an inability to adequately oxygenate tissue and maintain overall metabolism and represents one of the leading causes of morbidity and mortality in developed countries, with a significant incidence in low-income countries. So far, only natriuretic peptides have been used clincally to diagnose and monitor heart failure and are currently considered a "gold standard" in the treatment and monitoring of patients with heart failure. Soluble suppression of tumorigenicity 2 (sST2) belongs to the group of myocardial remodelling biomarkers and it was documented that it may provide additional value in the diagnosis, prognosis and stratification of risks in heart failure. sST2 is a member of the interleukin-1 receptor family and most likely represents a cardiomyocyte product in response to myocardial stress, resulting in the accelerated fibrosis and detrimental remodeling of the heart. sST2 may be easily measured in plasma and is minimally affected by patient characteristics: age, obesity, cause of heart failure and anaemia. There is a strong deal of evidence that ST2 may be a strong prognostic biomarker, which provides independent and additive prognostic information for patients with chronic heart failure. Will it be able to replace natriuretic peptides as in monitoring of heart failure future research future research is warranted.

Key words: sST2, heart failure, biomarkers, natriuretic peptides, cardiac remodeling