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The significance of natriuretic peptide in heart failure

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Introduction: Congestive heart failure caused dominantly by coronary artery disease activates number of compensatory mechanism where secretion of natriuretic peptide takes a very important place. N-terminal pro brain natriuretic peptides are an established biomarker of ventricular dysfunction for diagnosis, screening, prognosis, monitoring and optimization of pharmacological management.

Aims: High plasma levels of NTproBNP before cardiac procedure are associated with higher prognostic importance.

Methods: We included 60 patients (43 men and 17 woman), undergoing coronary revascularization (CABG), or replacement of aortic (mitral) valvular. All patients had left ventricular dysfunction with reduced ejection fraction (EF<40%). Plasma level of NTproBNP has been taken preoperatively and postoperative five days after surgery.

Results: Our results have shown that concentration of NTproBNP were 1322.2 pg/ml preoperatively, and in postoperative period 6067.9 pg/ml for all participants. The subgroup with severe dysfunction of the left ventricle (EF<30%) had value of NTproBNP 1560.47 pg/ml preoperatively while the subgroup with intermediate left ventricular dysfunction (EF 31-40%) had a value of 1194.00 pg/ml. In postoperative period in subgroup of participants with EF<30% NTproBNP level was 7219.23 pg/ml compared with subgroup with EF 31-40% where this parameter valued 5461.00 pg/ml.

Conclusions: Concentration of NTproBNP was correlated with left ventricular dysfunction. All participants had postoperative NTproBNP increase (p<1%). NTproBNP has a strong prognostic value and it will help us to identify patients who will need more intensive management after hospital discharge. Repeated biomarker measurement will become the strongest independent prognostic marker for re-hospitalization, adverse cardiovascular events and mortality in short and long-term period. Using NTproBNP as a biomarker-guide therapy, we will try to act on the main goal of heart failure treatment which includes: prognosis, morbidity and mortality.

Biography

Faida Kučukalić has completed her Residency in 1980 at University Clinical Centre Sarajevo (UCCS). She has specialization in the field of Cardio-anaesthesiology in referent cardio-surgery centers in Western Europe. She is the Chief of Cardio-anaesthesiology and Intensive Care Unit at Heart Centre UCCS. She received recognition for special contribution in development of cardio-surgery, cardio-anaesthesiology from Directory Board UCCS. She completed her PhD entitled "NT pro BNP as a marker left ventricle dysfunction" in 2013. She attended various congresses and published 60 papers.

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