DE GRUYTER OPEN

ACTA FACULTATIS MEDICAE NAISSENSIS

DOI: 10.1515/afmnai-2017-0034

UDC: 577.112:616.12

Original article

The Factors Influencing Galectin-3 Levels in Acute Coronary Syndrome with Decreased Left Ventricular Function

Olivera Andrejić[1], Rada Vučić[2,3], Svetlana Apostolović[4,5], Milan Pavlović[4,5], Dragana Stokanović[6], Valentina Nikolić[6], Tatjana Jevtović - Stoimenov[7], Stefan Momčilović[8]

[1]*Clinic for Pulmonary Diseases, Clinical Centre Kragujevac, Kragujevac, Serbia*
[2]*University of Kragujevac, Faculty of Medical Sciences, Department of Internal Medicine, Kragujevac, Serbia*
[3]*Clinic for Cardiovascular Diseases, Clinical Centre Kragujevac, Kragujevac, Serbia*
[4]*University of Niš, Faculty of Medicine, Niš, Niš, Serbia*
[5]*Clinic for Cardiovascular Diseases, Clinical Centre Niš, Niš, Serbia*
[6]*University of Niš, Faculty of Medicine, Department of Pharmacology and Toxicology, Niš, Serbia*
[7]*University of Niš, Faculty of Medicine, Institute of Biochemistry, Niš, Serbia*
[8]*University of Nis, Faculty of Medicine, Ph. D. student, Niš, Serbia*

SUMMARY

The aim of our study was to determine the factors influencing galectin-3 levels in patients with acute coronary syndrome and decreased left ventricular ejection fraction. We collected material from 37 successive patients with acute coronary syndrome and decreased left ventricular ejection fraction, of which 19 patients had atrial fibrillation, and 18 patients who were without atrial fibrillation constituted a control group. Blood samples used for the biochemical measurements were obtained on the third day from acute coronary syndrome. We used Statistical Package for Social Sciences for data analysis. A p-value less than 0.05 was considered to be a measure of statistical significance. Galectin-3 concentration is directly correlated with age and B-type natriuretic peptide level. Also, our results showed an inverse correlation between galectin-3 and total body weight, body mass index, body surface area and creatinine clearance. The following variables were found to be significant predictors of galectin-3 level: decreased left ventricular ejection fraction, total body weight, LDL concentration and body mass index. We identified factors that can predict a decrease in the left ventricular ejection fraction below 45% after acute coronary syndrome: atrial fibrillation increases the risk by almost six times, and urea concentration increases the risk by 1.2 times for each unit. Left ventricular ejection fraction below 45%, TBW, body mass index and LDL level are good predictors of galectin-3 concentration in patients with ACS and decreased left ventricular ejection fraction. Atrial fibrillation could be a predictive marker of decreased left ventricular ejection fraction.

Key words: **galectin-3, acute coronary syndrome, atrial fibrillation**

Corresponding author:
Rada Vučić
Email: rada.vucic@gmail.com