International Conference on
CARDIOLOGY AND CARDIAC NURSING
July 12-13, 2019 | Zurich, Switzerland

Mean platelet volume, platelet aggregation, PLT, fibrinogen and CRP concentrations differences and correlations in chronic heart failure patients groups according to the NT-proBNP

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Background: According to the findings given in the literature, we raised the hypothesis that thrombosis in the CHF patients may to develop because of interaction of inflammation process and platelet activity. We aimed to compare the fibrinogen, CRP concentrations, platelet count, MPV and platelet aggregation in CHF patients' groups according to the serum NT-proBNP and to find the correlation between the following readings.

Methods: 120 patients with CHF and reduced ejection fraction (systolic heart failure) that had not been using any antiaggregants during the last two weeks and experienced no other factors affecting platelet, were included in the study. Patients were categorized into two groups: NT-probnp<800 ng/l -1 group, NT-probnp ≥800 ng/l - 2 group.

Results: There were no statistically significant differences in fibrinogen concentration, platelet count and platelet aggregation between the groups. The CRP was statistically significant higher in 2 group than in 1 group (4.60(0.58-90.50) and 3.13(1.0-40.80) respectively, p=0.033). There was a weak correlation between CRP and PLT (r=0.293, p=0.010), between CRP and NT-probnp (r=0.212, p=0.036) and between the MPV and fibrinogen concentration (r=0.205, p=0.012). There was a moderate correlation between MPV and NYHA (r=0.361, p<0.001), between NT-probnp and NYHA (r=0.388, p<0.001), between fibrinogen concentration and CRP (r=0.381, p<0.001).

Conclusions: Our results confirm, that 1) the low inflammation can take place in the MPV rising, 2) the platelet contribution in the CHF patients thrombosis formation needs to be clarified.

Biography

Ausra Mongirdiene has completed her PhD at the age of 29 years from Kaunas University of Medicine and postdoctoral studies from the same University. She is the professor of Chair of Biochemistry of Lithuanian University of Health Sciences, a member of the Lithuanian Laboratory Medicine and Lithuanian Biochemical Societies. She has published more than 55 papers in reputed journals and has been serving as an editorial board member of repute journals. She was a member of scientific committees of the International Health Sciences Conference-2018. Her research interest includes hemostasis system changes in patients with Cardiac diseases.

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