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Importance of NT-proBNP biomarker in the early detection of cardiotoxicity associated with chemotherapy

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Abstract

The aim: This study evaluated the role of the N-Terminal pro-Brain Natriuretic Peptide (NT- proBNP) biomarker in determining blood concentrations in the early detection of developing cardiotoxicity associated with chemotherapy in oncology patients.

Materials and methods: 43 patients were included in the study. Eligibility criteria: Female patients aged 20-65 years who are practically healthy from the cardiological point of view and performed drug chemotherapy due to the diagnosis of breast cancer. All patients underwent transthoracic echocardiography and blood concentration of the NT-proBNP biomarker before, during courses and after the IV course.

Result: In transthoracic echocardiography: the left ventricular ejection fraction did not decrease by more than 10% from the lower limit of the basal value; b) diastolic dysfunction was noted in the assessment of left ventricular diastolic function with e'septal <7, E / e'> 15, LAVI> 34 ml / m2; c) no significant change in heart valve function was noted. In patients with the highest level of NT-pro BNP in the blood (> 300 pg / ml) the clinical symptoms was more severe than in patients with the lowest concentration of NT-pro BNP (> 125 <300 pg / ml). This suggests that there is a positive correlation between clinical signs of heart failure and NT-proBNP levels in patients with left ventricular systolic dysfunction and diastolic dysfunction on transthoracic echocardiography.

Conclusion: Transthoracic echocardiocardiography and blood test for NT-proBNP biomarker are effective and sensitive methods for assessing chemotherapy-related cardiotoxicity. For this purpose, it is used as a routine in daily practice in the early diagnosis of HF.

Key words: chemotherapy, N-Terminal pro-Brain Natriuretic Peptide

Biography

Bayramzadeh Sara Rafayil gizi. In 2006-12 She studied at the faculty of medical work at the azerbaijan medical university. In 2013-17 She studied at the azerbaijan medical university on residency in cardiology. She was currently conducting research in the field of cardiooncology at the azerbaijan medical university. Five articles have been published.

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