THE RELATION TO CARDIAC FUNCTION AND THE ANALYSIS OF RISK IN IN-HOSPITAL MORBIDITY OF RED CELL DISTRIBUTION WIDTH WITH HEART FAILURE

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Objective To investigate the relation to New York Heart Association (NYHA) class and the clinical assessment of risk in in-hospital morbidity of red cell distribution width (RDW) with heart failure.

Methods 110 patients’ clinical records were enrolled in the past 5 years. The fundamental files, routine laboratory blood tests and biochemical laboratory parameters were studied retrospectively in the first items of in-hospital patients. The heart failure group was divided into three subgroups (NYA, NYB, NYC) by the NYHA class. The different levels of RDW did paired comparison of the three subgroups. Then these patients were divided into morality and non-mortality group based on that patients died or not in hospital. The risk factors were analysed by the student’s t test and Pearson’s χ² test. The significant risk factors were studied by the multivariable logistic regression analysis for the OR.

Results With the aggravating of cardiac function, RDW was concomitantly increased (RDW (%): (13.9±1.6), (14.9±1.7), (15.5±1.4), p<0.05). Multivariable logistic regression model analysis was used to analyse the significant risk factors and displayed the indicators of RDW (B=0.157, OR 1.170, 95% CI 1.018 to 1.345, p=0.028).

Conclusion The base line’s levels of the RDW are relevant to the cardiac function’s class in heart failure. With the increasing of NYHA grade, RDW was concomitantly increased and hinted the relation to the serious degree to the cardiac inadequacy. The higher levels of RDW was the independent risk factor for in-hospital morbidity with the heart failure of the NYHAα-χ class.