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RISK OF MYOCARDIAL INFARCTION REVEALED BY VARIATION OF CARDIAC TROPONIN I LEVELS WITH AGE AND GENDER: A CASE STUDY IN THE BACAU COUNTY HOSPITAL

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Abstract

More and more attention has been given lately to the cardiac Troponin, which have great importance in regulating the contractility of the cardiac muscle. An increase in the Troponin levels can surely serve both for the diagnosis as well as for the prognosis of an acute myocardial infarction AMI. The increase of these AMI markers appears in 3-4 h and can last up to 3-4 weeks. This study has dealt with the comparison of the cTnI levels in the case of AMI for three age categories: 36-50, 51-65 and over 65 years old, both for female and male subjects, as well as with the comparison of the cTnI levels of the two sexes. We have included in the study a number of 65 patients, 20 females and 45 males, which were hospitalized in the cardiology department of Bacau County Hospital during 2008-2011. The device used for the measurements was the Pathfast immuno-analyzer. Statistical univariate analyses were used to compare the cTnI levels by age, group and gender. As far as we know it, such a comparative study has never been done. The biochemical results that have been obtained showed that the level of the I Troponin was significantly higher with the male patients for the categories of 36-50 and 51-65 years old. With the 36-50 years old category, the average Troponin value was 2 µg/L and for the 51-65 category, the average value was 2.3 µg/L. Females have a higher predisposition to complications that may arise as a result of myocardial necrosis in old age, over 65 years. Kruskal Wallis Values test results confirm a greater differentiation between age groups: men ($\chi 2 = 21.461$, df = 3, $p < 0.05$). The relationship between the increases of the cTnI is associated with the complicated lesions that occur in AMI. Therefore, the frequent, not just passenger use of Troponin, should become an issue of major medical importance and the male age category of 51-65 years should be provided increased medical attention.

Key words: gender, myocardial infarction, myocardial necrosis, non parametrical tests, Troponin I

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