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ROLE OF STANDARD MARKERS AND HSP 70 IN DIAGNOSTIC AND PROGNOSTIC MANAGING OF ACS

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BACKGROUND-AIM

Atherosclerotic changes followed in plaque formation, instability and rupture lead to serious ischemic events that can be measured and treated. Chosen panels that can facilitate diagnosis and in that manner protocol in treatment and prognosis are based on standard parameters involve in heart muscle metabolism and activity.

Our study is aimed in enlarging the field of option to diagnose, follow up and prognoses further event induced by hypoxia and in same time providing more benefit to the patients, physicians and laboratory workers. With that purpose we try to find out is specific markers for oxidative stress such as Heat shock proteins can fulfill the expectations.

METHODS

In this study we include measuring of CK, CKMB, (activity or mass concentration) Myoglobin and Troponins. Additionally, measuring of HSP 70 was due to fact that those molecular chaperons are involve in engaging processes for cell and tissue protection. Inflammation response was measured by CRP level and leukocytes count.

Spectrophotometry and immunoassay based on electro-chemi-lumiscence were used in measuring enzyme activity and level of CRP, myoglobin, troponin and mass concentration. Presence and concentration of HSP70 antibody was estimated with ELISA technique.

RESULTS

Statistical analysis shows elevation in activity of CK and CKMB, but most remarkable and significant increase was estimated for CKMB mass concentration and Troponin T at the patient diagnosed with AMI. Since our interest was pointed in level of HSP 70, CRP and leukocytes count, our results show significant differences ($p < 0,05$) between patients values vs control. Namely, concentration of HSP 70 antibody at the patients with AMI was estimated as 26.3 -fold higher values vs control group ($p < 0,05$). As for CRP level increase was pointed at 8,6-fold vs control group while moderate elevation of leukocytes count was found at the patients diagnosed as AMI (2,0-fold increase vs control group).

CONCLUSIONS

Our result confirm activation of HSP70 in condition of oxidative stress and induction of several mechanisms in protection of tissue stability as well as preventing proteins disintegration in such condition. From here, our standings is that measuring of this protein in follow up period can provide useful information in predicting event and patients outcome.