

THE INFLUENCE OF THYROID HORMONES ON PERIPHERAL VASCULATURE AFTER ACUTE MYOCARDIAL INFARCTION

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Introduction: The treatment with thyroid hormones (TH) have presented positives effects over the myocardium after acute myocardial infarction (AMI), but there is no data regarding the influence of AMI and this treatment over the peripheral vasculature. **Objective:** The main goal was to analyze the influence of these factors on the peripheral vasculature through parameters of oxidative stress, angiogenesis and TH receptors (TR α , TR β) and endothelial nitric oxide synthase (eNOS) expression. **Methods:** Male Wistar rats (~350g)(n=11-16/group) were divided into four groups: Sham-operated (SHAM), infarcted (AMI), sham-operated + TH (SHAMT) and infarcted + TH (AMIT). During 12 days, the animals received T3 and T4 (2 and 8 μ g/100g/day) by gavage. After, the rats were submitted to echocardiographic analysis. The aorta was collected to molecular analysis. Statistical analyses: two-way ANOVA with Student-Newman-Keuls post test. **Results:** The vascular endothelial growth factor, hypoxia-inducible factor 1 α , TR α and TR β receptors expression increased in AMIT compared to AMI. The reactive oxygen species production, NADPH oxidase activity and eNOS expression decreased in AMI compared with SHAMT, while there is no deference between AMIT and AMI. **Conclusion:** The TH presented an action over angiogenesis and TR α and TR β expression on peripheral vasculature in a post-AMI period. These may indicate an improvement in angiogenesis and a better responsiveness of peripheral vasculature to HT.

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