

Grape Seed Extract and Zinc Containing Multivitamin-Mineral Nutritional Food Supplement Protects Heart against Myocardial Ischemic-Reperfusion Injury in Wistar Rats

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Abstract : Zincovit tablets have been used as nutritional food supplement over a prolonged period of time. The aim of the present study was to investigate the cardio-protective effect of combined formulation of grape seed extract and Zincovit tablets (40, 80 and 160 mg/kg) using a Langendorff model of ischemia-reperfusion in Wistar rats. Following 21 days of pre-treatment, combined formulation of grape seed extract and Zincovit tablets significantly attenuated ischemia-reperfusion induced cardiac injury in terms of increased coronary flow rate ($p < 0.01$), decreased creatine kinase activity in coronary effluent ($p < 0.05$), decreased MDA ($p < 0.001$), 4-HNE ($p < 0.001$) and increased protein thiol content ($p < 0.01$) in comparison with the untreated (control) group. This study opens an avenue to clinical studies to demonstrate the validity of this paradigm as a nutritional food supplement, which could improve the clinical outcome of patients subjected to percutaneous angioplasty.

Keywords : grape seed extract, myocardial ischemia-reperfusion injury, oxidative stress, Zincovit tablets

Conference Title : ICPPS 2014 : International Conference on Pharmacy and Pharmaceutical Sciences

Conference Location : Singapore, Singapore

Conference Dates : September 11-12, 2014