

Research article

Cardioprotective effect of virgin coconut oil (VCO) on rats induced by doxorubicin

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Abstract

Cardiotoxicity is caused by anticancer drugs, one of the anticancer drug is doxorubicin. doxorubicin triggered free radicals reaction in heart muscle cells this results in the death of heart muscle cells or cardiomyopathy, in this condition, the heart can't pump blood properly and caused heart failure, virgin coconut oil (VCO) has antioxidant such as polyphenol that can neutralize the free radicals formed by doxorubicin. The aimed of this research was to evaluate the activity of cardioprotective effect of VCO on rats by induced doxorubicin with accumulative dose of 15 mg/kgbw for 21 days, by administering a 5 mg/kgbw dose in a week, and for 21 days of the rats given doses 2 VCO ml, 4 ml and 6 ml subsequently conducted an examination of CK-MB and LDH in the blood. The result showed that the effect cardioprotective from VCO reduce the levels of serum CK-MB (Creatinin kinase – MB) and the LDH (Lactate dehydrogenase) as the biomarker of heart. Group dose 6 ml showed the level of CK-MB $2110.37 \pm 184,173$ mg/dl and the level of LDH 2903.9 ± 70.0743 mg/dl and differ significantly ($p < 0.05$) with the negative control group induced doxorubicin. VCO is highly recommended to be food supplements for the patient used anti-cancer.
