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Effect of erythrina indica on stress induced alteration on lipid profile in rats

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Abstract

Objective

The study was undertaken to evaluate the effect of stress induced alteration on lipid profile in rats by different fractions (Petroleum ether, ethyl acetate and chloroform) of ethanolic extract of Erythrina Indica an indigenous plant used in ayurvedic medicine in India.

Methods

The study was carried on albino rats (150-200g) of either sex, divided into four groups of 6 each. Group I served as control, Groups II, III and IV was treated with different fractions (Petroleum ether, ethyl acetate and chloroform) of ethanolic extract of Erythrina Indica 150mg/kg, p.o. in a single daily dose from day 1 to day 22. Physical stress of 5 hours swimming was given to all the groups on day 22. Blood samples were withdrawn in group I on day 0 (blank control) and on day 22 after stress (positive control). Blood samples were withdrawn in group II, III and IV on days 3,7,14 and 21 and on day 22 after stress.

Results

All the blood samples were analyzed for total cholesterol (TC) HDL, cholesterol (HDLC) triglyceride (TG) by enzymatic method and LDL & VLDL cholesterol was calculated by on the basis of Friedwalds equation. After 21 days of treatment changes the serum lipid levels in rats insignificantly. In control group stress increased the lipid levels in rats significantly except HDL cholesterol which reduced insignificantly. When Erythrina indica treated rats were subjected to stress on day 22, their serum lipid levels increased significantly except HDL cholesterol which reduced insignificantly.

Conclusions

study indicates that various fractions (Petroleum ether, ethyl acetate and chloroform) of the ethanolic extract of Erythrina Indica is effective in attenuating stress induced dislipidemia in rats.

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