

Hypolipidemic potential of Ayurveda drug formula in lipid induced rats

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Lipid disorders are described as Medoroga in the Ayurveda system of medicine. Different herbal and herbomineral preparations are used to treat this disease condition. Among them Arogyavardhane vati pill (AV) is one formula known to control high blood glucose levels and cholesterol levels. The objective of the study was to evaluate the lipid lowering activity of AV in hyperlipidemic rats by comparing its activity with reference hypolipidemic drugs, Simvastatin (ST) and Lipicard (LI). The drug, prepared according to Ayurveda Pharmacopeia of Sri Lanka, was purchased from Ayurvedic Drugs Corporation and used in this study. Adult Wistar rats were purchased from the Medical Research Institute and were made hyperlipidemic by giving them a high fat diet (HFD) mixture prepared by thoroughly mixing egg yolk (40 g) and Anchor butter (10 g) for 10 min. Prepared HFD was orally administered using feeding tubes at 10 h intervals for 14 consecutive days while the control group for 28 days. The blood samples were collected, and serum lipid profiles were determined using Randox lipid profile assay kits. The rats with total cholesterol levels greater than 100 mg/dL were selected as lipid induced rats. Lipid induced rats were randomly divided into groups (n=9). Test drugs were administered to lipid induced rats as AV 34 mg, ST 1 mg, LI 6 mg twice a day, morning and evening, for a further 14 consecutive days and serum lipid profiles were estimated using assay kits. Percentage values of increase in cholesterol levels in lipid induced stage, and in reduction of blood lipid profile levels in drug treated groups were calculated and analyzed using Mann-Whitney U-test and significance compared with the control at ($p < 0.05$). Total cholesterol levels (105 mg/dL) of lipid induced rats were decreased by AV in 49.3% compared to 48.3% and 27.6% by reference drugs ST and LI respectively. Triglyceride levels were reduced in a similar manner: 62%, 61%, 60% by administered drugs AV, ST and LI respectively. Results revealed that AV pill has good lipid lowering activity. This lipid lowering potential is similar to ST and LI. It can be concluded that AV pill is an effective drug for managing lipid disorders.

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