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Evaluation of the effect of an Ayurvedic formula on total cholesterol and high-density lipo protein cholesterol

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The objective of the present study was to evaluate the effect of an Ayurvedic formula on total cholesterol and high-density lipo protein cholesterol (H.D.L. cholesterol). *Cedrus deodara* (Devadara), *Resimus communius* (Erandu mul), *Tinospora cordifolia* (Rasakinda), *Terminalia chebula* (Aralu), *Boerhavia diffusa* (Sarana mul) and *Zingiber officinale* (Inguru) were used in equal quantities. Dried water-soluble extracts were prepared and reconstituted to form 20 mg / ml and 40 mg / ml aqueous solutions. The research was conducted at the pharmacology laboratory of the Institute of Post Graduate Teaching and Research in Ayurveda, India. Charles foster strain albino rats in either sex, weighing 178 – 230 g, maintained on "Amrut" brand rat pellet feed and exposed to natural day and night cycles, were used as the test animals. They were randomly divided in to three groups of five animals each. Group-1 control; received tap water. Group- 2 and 3 were given 20 mg / ml and 40 mg / ml solutions orally for ten days. Dose was calculated as described by Paget and Barnes (1966). On the tenth day, animals were weighed and sacrificed by stunning and severing of jugular vessels. Serum was separated from collected blood and used for estimation of total and H.D.L. cholesterol levels using commercial biochemical kit. (Qualigens fine chemicals, Glaxo India Limited). Reagents and method were based on Kybenga and Pileggi's Method (1970). The Paired "t" test was used for the statistical Analysis. The Test drug did not affect serum total cholesterol level significantly. Mean total cholesterol level in mg/dl was 128.89 ± 4.78 in Control, 128.89 ± 6.89 in Group 2 and 125.54 ± 2.90 in Group 3. Statistically significant and dose dependent increase in serum H.D.L. cholesterol levels were observed in both lower and higher dose groups in comparison to the control group. Mean ± SEM in Group 2; 18.06 ± 1.86 ($P < 0.05$) and (t-2.59), Group 3; 20.28 ± 1.94 ($P < 0.01$) and (t-3.42), control (11.67 ± 1.61). The study has indicated mild to moderate dose dependent serum H.D.L. cholesterol increasing effect of the test drug.

Keywords: ayurvedic formula, total cholesterol, high-density lipo protein cholesterol