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Effects of *Aporosa lindleyana* (kabella) on blood chlesterol levels of wistar rats

Hypercholesterolaemia has been recognized as a major risk factor Coronary Heart Disease. The present study was undertaken to investigate the effects of Aporosa lindleyana (Family Euphorbiaceae) on a) serum cholesterol levels, b) absorption of dietary cholesterol, using Wistar rats as the experimental model.

Male wistar rats (n=24), aged 3 months, obtained from the Medical Research Institute, Colombo, were fed with a standard diet for 2 weeks. The rats were assigned randomly into four groups ($test_I$, $control_I$, $test_{II}$ and $control_{II}$) with 6 rats in each and all the rats were fed with a cholesterol-enriched diet for 2 weeks to induce hypercholesterolaemia.

The high cholesterol diet in the frist two groups (($test_I$, $control_I$) was replaced with a normal diet at week 3 and $test_I$, was given on oral dose Aporosa lindleyana (3 g / kg body wt./ day) whereas, $control_I$ was given distilled water for two weeks. To find out the effects on the absorption of dietary cholesterol, rats in $Test_{II}$ were treated with an oral dose of Aporosa lidleyana simultaneously with the high cholesterol diet during the frist two weeks whereas the rats in $control_{II}$ were treated with distilled water.

Blood samples were collected at), 1,2,3, and 4 weeks for determination of the total and High Density Lipoprotein (HDL)-cholesterol levels.

The pretreatment levels of the mean total cholesterol and the total/HDL cholesterol ratio were 73.0 ± 17.2 and 1.9 ± 0.3 respectively. The mean total cholesterol level and the total/HDl cholesterol ratio at the end of week 4 were significantly lower ($p<00.5$) in the Aporosa lindleyana treated group (53.6 ± 5.3 mg/ dl and 1.8 ± 0.16 for $control_I$). Also the mean total cholesterol level and the total / HDL ratio of test II(77.4 ±19.6 mg/dl and 1.4 ± 0.07) respectively) were significantly lower ($P<0.05$) than that of control II (124.1 ± 30.2 mg/ dl and 1.9 ± 0.3 respectively). Our data shows that Aporosa lindleyana reduces blood cholesterol levels of Wister rats.