Blood Lipid Profile and Liver Lipid Peroxidation in Normal Rat Fed with Different Concentrations of Acacia senegal and Acacia seyal

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Abstract : The aim of the present study was to evaluate the blood lipid profile and liver lipid peroxidation in normal rat fed with different concentrations of Acacia senegal and Acacia seyal. Thirty six Sprague Dawley male rats each weighing between 180-200g were randomly divided into two groups. Each group contains eighteen rats and were divided into three groups of 6 rats per group. The rats were fed ad libitum with commercial rat’s feed and tap water containing different concentrations of Acacia senegal and Acacia seyal (3% and 6%) for 4 weeks. The results at 4 weeks showed that there was no significant difference (p≤0.05) in the total cholesterol (TC) and triglycerides (TG) between the control group and treated groups while the results for the high density lipoprotein (HDL-C) showed a significant decrease (P≥0.05) at the 3% and 6% of gum arabic treated groups compared to control group. There was a significant increase (P≥0.05) in low density lipoprotein (LDL-C) with 3% and 6% of gum Arabic (GA) groups compared to the control group. The study indicated that there was no significant (p≤0.05) effect on TC and TG but there was significant effect (P≥0.05) on HDL-C and LDL-C in blood lipid profile of normal rat. The results showed that after 4 weeks of treatment the malondialdehyde (MDA) value in rat fed with 6% of A. seyal group was significantly higher (P≥0.05) than control or other treated groups of A. seyal and A. senegal studied. Thus, the two species of gum arabic did not have beneficial effect on blood lipid profile and lipid peroxidation.

Keywords : Acacia senegal, acacia seyal, lipid profile, lipid peroxidation, malondialdehyde (MDA)
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