ABSTRACT

EFFECT OF AVOCADO ADMINISTRATION ON TOTAL CHOLESTEROL, HDL CHOLESTEROL, AND LDL CHOLESTEROL LEVELS IN BLOOD PLASMA OF HYPERCHOLESTEROLEMIC MALE WISTAR STRAIN (Rattus norvegicus) RATS

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This experimental study using rats as experimental animal, was aimed to identify the effect of avocado administration on total cholesterol level, HDL cholesterol level and LDL cholesterol level in blood plasma of hypercholesterolemic rats.

This study was undertaken in two periods, a high lipid diet was given to create a hypercholesterolemia condition in the first period, and in the second period avocado was given to identify hypocholesterolemic effect of the fruit. A number of 32 male rats of 3 months old with body weight of 155 – 198 grams were used as experimental animal divided in 4 group i.e., pretest group, control group (P0), treatment group with avocado 2.7 gram/day (P1) and that with avocado 5.4 gram/day (P2). Total cholesterol, HDL cholesterol, and LDL cholesterol levels in blood plasma measured at the end of the second period. Data obtained were analyzed using analysis of variance and LSD test at 5% degree of error.

The results of this study showed that avocado intake resulted in significantly different effects on total cholesterol level and HDL cholesterol level, but not significant on LDL cholesterol level and HDL/LDL ratio. Total cholesterol levels were 82.75 mg/dL in P0, 75.58 mg/dL in P1, and 70.73 mg/dL in P2. HDL cholesterol levels were 48.25 mg/dL in P0, 40.88 mg/dL in P1, and 42.38 mg/dL in P2. LDL cholesterol levels were 26.75 mg/dL in P0, 25.63 mg/dL in P1, and 21.88 mg/dL in P2. HDL/LDL ratio were 1.906 in P0, 1.648 in P1, and 1.979 in P2.

Keywords: avocado, total cholesterol, HDL cholesterol, LDL cholesterol