Effect of Apple Juice and Dragon Fruit Combination on Total Cholesterol Levels in Hypercholesterolemic Wistar Rats

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ABSTRACT

Hypercholesterolemia is a condition characterized by increased levels of total cholesterol and Low Density Lipoprotein (LDL) and decreased levels of High Density Lipoprotein (HDL) in the blood. One alternative to prevent hypercholesterolemia is to increase the intake of antioxidants and fiber. Some fruits such as apples and dragon fruit have antioxidant and fiber content that can reduce total cholesterol levels. This study aims to analyze the effect of a combination of apple juice and dragon fruit on total cholesterol levels in hypercholesterolemic Wistar rats. This type of research is True Experimental with Pretest-Posttest with Control Group Design. The study used 22 male white rats which were divided into 3 groups of negative control (K-), positive control group (K+), and treatment group (P). Rats were induced with a mixture of quail egg yolk, cooking oil and beef fat at 5ml/200gr BW/day and PTU at 0.01% for 30 days. Intervention was carried out for 18 days using a combination of apple juice and dragon fruit as much as 1.05ml/mouse/day. The study showed that there was a significant difference between groups before intervention (p=0.018), there was a significant difference between groups after intervention (P=0.000), and there was no significant difference in the difference before and after intervention between groups (p=0.224). Therefore, it can be concluded that the combination of apple juice and dragon fruit has not been able to reduce total cholesterol levels in hypercholesterolemic rats.

Keywords: Apple, Dragon Fruit, Total Cholesterol, Hypercholesterolemia