EVALUATE POTENTIAL OF HYPERCHOLESTEROLAEMIC INDUCTION ON MICE WITH BUTTER, CHOLESTEROL AND CHOLIC ACID ENHANCED EXPERIMENTAL FOOD

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Introduction: Food/fraction researches have been done on animal model to obtain preliminary results on humans. Hyperlipidaemia diet models for mice that began being developed around 1960 and 1870 decades confirm these studies. This models aid now on dyslipedemia contributing to preliminary studies of possible therapeutic effect substances. Objective: Evaluate potential of hypercholesterolaemic induction with butter, cholesterol and cholic acid enhanced experimental food on mice. Methods: A hypercholesterolaemic diet was adapted according to Wilson et al. (2007), prepared on following proportion: standard food (Primor Mill MP-77), 10% of butter, 1% of cholesterol and 0.1% of cholic acid offered to animals as pellets. It was determined amounts of humidity, proteins, ashes, lipids and fibers according to AOAC (2005) and carbohydrate per difference. Animals were split into 2 groups (n= 10 animals) that received standard diet and hypercholesterolaemic diet for 20 days. Blood samples were collected to lab exam determination (total cholesterol, triglycerides, high density lipoprotein and glicose). The experiment was approved by UFC Ethic Committee on Animal Research (CEPA) under number 90/10. Results: Caloric content on 100g food corresponds to 339.84 Kcal; Humidity: 7.76%; Proteins: 14.87%; Ashes: 8.2%; Lipids: 11.84%; Fiber: 13.88%; Carbohydrates: 43.45%. It is noticed an amount four times bigger of fat, an increase of 79.84 Kcal of fat/100g food. The diet increased total plasmatic cholesterol characterizing hypercholesterolaemia when compared to standard food group. However, there were no meaningful differences on triglycerides, HDL-cholesterol and plasmatic glucose levels. Conclusion: Standard food enhancement of 10% of butter, 1% of cholesterol and 0.1% of cholic acid can induce hypercholesterolaemia on mice.

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