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Effect of Conjugated Linoleic Acid on Lipid Metabolism and Increased Fat around the Muscle Durability by Reducing the Oxidation Process

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Abstract : Conjugated linoleic acid (CLA) is a mixture of isomers of linoleic acid. Despite the fact that 28 different isomers of CLA have already been identified, but the main isomer found in natural diets more than ninety percent CLA on intake of food constitutes demonstrates. CLA is known to be a substance that readily available by rumen microorganisms in some ruminants such as cattle and sheep would likely be made. The main objective of this research was to evaluate the impacts of CLA on lipid metabolism and enhanced fat around the muscle durability by reducing the process of oxidation. In order to implement this research, 80 female mice of the Balb/C, with 55 days of age were employed in the experiment. Treatments include various levels of CLA. Over the course of this study blood samples was also taken from the tail vein of the studied mice. Some other relevant parameters such as serum concentrations of triglycerides, total cholesterol, LDL, HDL and liver enzymes were also determined. The oxidative stability of fats TBARS technique was investigated at different intervals. The findings of the research were analyzed by statistical software of SAS 98. The results, CLA had no significant effect on liver enzymes ($P > 0.05$). However, it showed a statistically significant impact on triglycerides and total cholesterol. Ratio of LDL to HDL declined remarkably. Histological studies demonstrated reduced accumulation of fat in the tissues surrounding muscles.

Keywords : conjugated linoleic acid, fat metabolism, fat retention, oxidation process
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