Abstract

Background: The chronic use of steroid hormones can lead to alterations in the lipid profile such as an increase in LDL and decrease in HDL levels. The effect of flaxseed on lipid profiles has been widely investigated. Aim: Evaluate the lipid profile of adult male Wistar rats fed with flax based meals and submitted to androgenic hyperstimulation. Material and Methods: Forty Wistar rats were divided into 4 groups of 10 animals: the Control group (CG); Flax group (FG) fed a flaxseed flour-based meal; Induced group (IG); and the Induced group (IGF) that was fed a flaxseed flour-based meal. The induction was done by using silicone pellets filled with testosterone propionate (1mg), sealed with a surgical adhesive and substituted every 4 weeks. Results: Triglycerides (FG: 71.16 ± 21.95; IG: 99.16 ± 26.00 and IGF: 86.33 ± 27.16 mg/dL) and HDL-cholesterol (FG: 23.05 ± 1.67; IG: 29.06 ± 7.24 and IGF: 26.06 ± 3.56 mg/dL) were significantly lower in the experimental groups. The FG and IGF (41.16 ± 3.97 and 49.66 ± 11.25 mg/dL, respectively) showed significantly lower levels of cholesterol than the other groups (CG: 78.85 ± 11.58 and IG: 70.83 ± 14.85 mg/dL). Regarding LDL levels, the IG showed significantly higher concentrations (21.93 ± 8.84 mg/dL) than the others groups (CG: 7.81 ± 5.37; FG: 3.88 ± 1.32 and IGF: 6.66 ± 7.24 mg/dL). Conclusions: The flaxseed has a relevant effect on the lipid profile of animals submitted to androgenic hyperstimulation.

Keywords

steroid hormone, rat, cholesterol, flaxseed.