Abstract

Flaxseed intake has increased owing to beneficial effects to health and prevention of diseases. Provided that it’s an important source of lignan, a phytoestrogen, the present study aimed at evaluating the possible effect of the intake of this seed during lactation upon prostate, sexual hormones and lipidic profile of the offspring in adult life. Material and methods: 16 female Wistar rats were used. After delivery, they were divided into two different groups to receive one of the following diets during lactation: Control group (CG), with a casein based diet and Flaxseed group (FG), with a flaxseed based diet containing 25% flaxseed. At weaning, male pups received commercial chow until adult life (170 days old), when they were sacrificed. Results: No differences were perceived concerning offspring food intake and body weight at 170 days. There was a reduction in total cholesterol levels (FG = 45.71 ± 8.96 mg/dL; CG = 63.43 ± 15.69 mg/dL, p = 0.02) and triglycerides (FG = 54.29 ± 11.10 mg/dL; CG = 79.86 ± 25.68 mg/dL, p = 0.03). Also, no alterations were observed in prostatic morphology, testosterone or estradiol levels in the two groups analyzed. Conclusion: Flaxseed intake during lactation did not produce histological alterations in prostatic alveolus or in sexual hormones, but programmed to a reduction in lipid profile in adult life with decreased cardiovascular risk.

Keywords

Flaxseed, Lactation, Prostate, Lipid profile, Rats.