

عنوان مقاله:

Hydroalcoholic extract of flaxseed improves polycystic ovary syndrome in a rat model

محل انتشار:

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خلاصه مقاله:

Objective(s): Herbal medicines are an alternative choice for treatment or controlling of polycystic ovary syndrome (PCOS). Effect of hydroalcoholic extract of flaxseed was evaluated on ovarian hormones and histological changes of uterus and ovary in a PCOS-induced rat model. Materials and Methods: Twenty four rats divided into four groups including negative control, positive control, PCOS and treatment groups. Positive control group received hydroalcoholic extract of flaxseed for 30 days. PCOS was induced by single intramuscular injection of estradiol valerate. Treatment group was treated with flaxseed extract 7 weeks after induction of PCOS for 30 days. Ovaries and uterus were dissected out and their sections were used for histomorphometric study. Levels of estradiol, progesterone, testosterone and dehydroepiandrosterone (DHEA) were measured in the serum. Results: In the treatment group, flaxseed extract increased level of progesterone ($P < 0.05$), while decreased testosterone ($P < 0.05$) compared with the PCOS group. Concentrations of estrogen and DHEA did not change significantly in comparison with the PCOS group. Histomorphometric study showed that in the treatment group, the number of preantral follicles, antral follicles and corpus luteum increased compared with the PCOS group ($P < 0.05$), but the number of cystic follicles and diameter of antral follicles decreased ($P < 0.05$), and the number of primary follicle did not alter significantly. In the treatment group, the thickness of granulosa layer increased, but the thickness of theca layer and tunica albuginea decreased compared to the PCOS group ($P < 0.05$). Conclusion: Hormonal profile and histomorphometric features of ovary that were disturbed by PCOS induction were ameliorated by hydroalcoholic extract of flaxseed.

کلمات کلیدی:

Flax, Ovary, Polycystic ovary syndrome, Rats, Sex hormones, Uterus

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