

عنوان مقاله:

Improved hormonal and oxidative changes by Royal Jelly in the rat model of PCOS: An experimental study

محل انتشار:

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خلاصه مقاله:

Background: Polycystic ovarian syndrome (PCOS) is an endocrine and complex metabolic disorder, associated with anovulation, changes in sex hormone, biochemical factors, and ovarian tissue. Royal jelly (RJ) has antioxidant and anti-inflammatory properties. Objective: To examine the therapeutic effect of RJ on PCOS-related hormonal and biochemical changes in a rat model of PCOS. Materials and Methods: In this experimental study, ۴۲ female Wistar rats (weighing ۱۸۰-۲۰۰ gr, aged ۱۰-۱۲ week) were divided into six groups ($n = 7$ /each): control; PCOS; RJ ۱۰۰ mg/kg; RJ ۲۰۰ mg/kg; PCOS + RJ ۱۰۰ mg/kg; and PCOS + RJ ۲۰۰ mg/kg. After ۲۱ days, the animals were weighed and dissected. The serums were used for nitric oxide (NO) and ferric-reducing antioxidant power (FRAP) assay and estradiol and progesterone measurements. The ovaries were assessed for histological changes. Results: PCOS increased estradiol and NO levels, and decreased progesterone and FRAP levels. In PCOS+ RJ groups, the progesterone ($p = 0.01$) and FRAP levels ($p \leq 0.001$) increased and the estradiol and NO ($p \leq 0.001$) levels decreased significantly. Moreover, the number of mature follicles ($p = 0.01$) and corpus luteum increased ($p \leq 0.001$), and ovarian and uterus weight decreased significantly ($p \leq 0.001$). Conclusion: RJ improved estradiol, progesterone, FRAP, and NO levels, and ovarian structure in the rat model of PCOS.

کلمات کلیدی:

Royal jelly, Polycystic ovary syndrome, Ovary, Sex hormone
روبال، سندرم تخمدان پلی کیستیک، تخمدان، هورمون جنسی.

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