عنوان مقاله:

The effect of hydroalcoholic extract of Nigella Sativa seed on dehydroepiandrosterone-induced polycystic ovarian syndrome in rats: An experimental study

محل انتشار:

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نویسندگان:

.Samira Khani - *Neuroscience Research Center, Qom University of Medical Sciences, Qom, Iran*

Maasoume Abdollahi - *Department of Anatomical Sciences, Medical Sciences Faculty, Tarbiat Modares University, .Tehran, Iran*

.Azam Khalaj - *Department of Physiology, School of Medicine, Qom University of Medical Sciences, Qom, Iran*

Hamid Heidari - *Cellular and Molecular Research Center, Qom University of Medical Sciences, Qom, Iran. .Department of Physiology and Pharmacology, Faculty of Medicine, Qom University of Medical Sciences, Qom, Iran*

.Somaye Zohali - *Student Research Committee, Qom University of Medical Sciences, Qom, Iran*

خلاصه مقاله:

Background: Polycystic ovary syndrome (PCOS) is one of the most common endocrine disorders among women. Objective: The aim of this study was to investigate the therapeutic effect of hydroalcoholic extract of Nigella sativa (N. sativa) seed as a plant, the consumption of which has been recommended in Islam, on dehydroepiandrosterone (DHEA)-induced PCOS rats. Materials and Methods: This experimental study was carried out on 36 Wistar female rats (3 wk, 60 ± 10 gr). Then rats were divided into 6 groups (n = 6/each): control; PCOS-induced (DHEA 60 mg/kg/sc); PCOS+ Metformine (30 mg/kg); and three experimental groups receiving DHEA + hydroalcoholic extract of N. sativa seeds in doses of 50, 100 and 200 mg/kg, respectively. Blood samples were taken for the evaluation of sexual hormones, oxidative stress, glucose, and insulin after 30 days of treatment. Ovarian tissue was used for histopathological study. Results: The serum levels of luteinizing hormone, testosterone, glucose, insulin resistance, malondialdehyde, and insulin ($p \leq 0.001$) and estrogen increased while the levels of progesterone ($p = 0.01$) and antioxidant enzymes in the PCOS group decreased ($p \leq 0.001$). Conclusion: The administration of the N. sativa extract to the PCOS rats resulted in remarkable changes in the serumic factors relative to the PCOS group. In addition, the extract improved the structure of the ovarian tissue in the PCOS rat. The histopathological results which are in accordance with biochemical findings imply that N. sativa seed could be useful in the treatment of PCOS, the .higher doses of the extract being more effective

کلمات کلیدی:

,.Nigella sativa seed, Oxidative stress, Insulin resistance, Polycystic ovary syndrome, Rat
سیاه دانه, استرس اکسیداتیو, مقاومت انسولینی, تخمدان پلی‌کیستیک, موش
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