

Effect of Nigella sativa on reproductive system in experimental menopause rat model

ABSTRACT

Objective: Menopause is the condition when regular menstrual periods cease and may be accompanied by psychological and physical symptoms. The purpose of current study was to determine Nigella sativa effects on reproductive system in experimental menopause animal models. **Materials and methods:** A series of experiments was conducted to investigate the effects of different dosages of N. Sativa (first experiment), various extracts of N. Sativa (second experiment) and some of its ingredients (third experiment) on selected menopausal parameters of ovariectomized (OVX) rats. Forty different OVX rats were equally divided into 5 groups and administered with one of the following treatments for 21 days: conjugated equine estrogen (positive control), distilled water or olive oil (negative control), treatment groups (N. Sativa 300, 600 and 1200 mg/kg in the first experiment), (300mg/kg methanol, hexane and SFE extracts of N. Sativa in the second experiment) and (linoleic acid 50 mg/kg, gamma linolenic acid 10mg/kg, and thymoquinone 15mg/kg in the third experiment). **Results:** The results demonstrated that N. sativa exert estrogenic effect were exhibited through uterotrophic assay and vaginal cell cornification as well as blood estrogen level. Furthermore, low dose N. Sativa, methanol extract and linoleic acid had prominent estrogenic like effects which were significantly different from those of control group ($p < 0.05$) in different experiments. **Conclusion:** The finding indicated the probable beneficial role for N. sativa in the treatment of postmenopausal symptoms and possibility of using N. sativa as an alternative to hormone replacement therapy (HRT) for post menopause in human.

Keyword: Menopause; Nigella sativa; Ovariectomized rats