

Metabolic impact of nigella sativa extracts on experimental menopause induced rats.

ABSTRACT

The aim of current study was to investigate the effects of different extracts of *Nigella sativa* on metabolic profile of ovariectomized rats. Forty ovariectomized Sprague Dawley rats were used in the study and randomly allotted into one of five experimental groups: treated with Supercritical Fluid Extraction (SFE), Methanol Extract and Hexane Extract of N.S (300mg/kg/day) compared to vehicle control (Olive oil 1ml) and estrogen group (0.2mg/kg Conjugated Equine Estrogen) by intra-gastric gavage as negative and positive control group respectively for 21 days. Food and water intake were measured daily and body weight and biochemical parameters were measured at baseline, 11th day and at the end of experiment. The treatment groups showed significant ($P < 0.05$) improvement with reference to low density lipoprotein cholesterol (LDL-C) and blood glucose ($P < 0.05$). There were no significant differences between groups in total cholesterol, high density lipoprotein and serum triglyceride concentration. These results suggested that treatment with *Nigella sativa* extracts exert a therapeutic and protective effect by modifying weight gain, improving lipid profile and blood glucose as well as hormonal level which is believed to play an important role in the pathogenesis of metabolic syndrome during menopause.

Keyword: Menopause; Metabolic syndrome; *Nigella sativa*; Ovariectomy.