

Alternative supplement for enhancement of reproductive health and metabolic profile among perimenopausal women: a novel role of *Nigella sativa*

ABSTRACT

Objective(s):

The aim of this open label crossover study was to investigate the effects of *Nigella sativa* on reproductive health and metabolic profile of perimenopausal women in Rawang, Malaysia.

Materials and Methods:

Sixty nine perimenopausal women aged 45 to 65 were allocated into the experimental group treated orally with 1600mg/day of encapsulated pure powdered *N. sativa* compared to control groups treated with placebo for 12 weeks. At the end of study, participants underwent washout period for fourteen days before being crossed over and continued for another cycle of treatment. Participants were abstained from taking any other drugs, herbal preparations or food supplements throughout the study. Body weight, height, waist circumference, blood pressure, biochemical parameters and hormonal levels were measured at baseline and at the end of experiment for both cycles. Face to face interview was carried out at baseline and every week to check for compliance, minimize dropouts and to record reproductive health and quality of life indicators using Greene climacteric and SF-36 instruments.

Results:

The treatment groups in both cycles showed significant improvement with reference to low density lipoprotein cholesterol and blood glucose ($P<0.05$). There were no significant differences between groups in total cholesterol, high density lipoprotein and triglyceride concentration. Treatment with *N. sativa* induced a significant reduction of prevalence and severity of menopausal symptoms as well as significant improvement in some components of quality of life ($P<0.05$).

Conclusion:

These results suggested that treatment with *N. sativa* 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: Metabolic syndrome; *Nigella sativa*; Perimenopausal; Reproductive health