

عنوان مقاله:

THE EFFECTS OF QUERCETIN SUPPLEMENTATION ON METABOLIC AND HORMONAL PARAMETERS AS WELL AS PLASMA CONCENTRATION AND GENE EXPRESSION OF RESISTIN IN OVERWEIGHT OR OBESE WOMEN WITH POLYCYSTIC OVARY SYNDROME

محل انتشار:

سومین کنگره بین المللی و پانزدهمین کنگره تغذیه ایران (سال: 1397)

تعداد صفحات اصل مقاله: 1

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خلاصه مقاله:

Background and Aim: The aim of this study was to investigate the effect of quercetin on metabolic and hormonal parameters as well as plasma concentration and gene expression of resistin in overweight or obese women with polycystic ovary syndrome (PCOS). **Methods:** In this randomized, double-blind, placebo-controlled trial, 78 overweight or obese women ($25 \leq \text{BMI} \leq 40 \text{ kg/m}^2$, 20-40 years) with PCOS were recruited. Patients were randomized to receive 1000 mg/d quercetin or placebo for 12 weeks. Resistin plasma concentration and gene expression in peripheral blood mononuclear cells (PBMC), parameters of glucose homeostasis, circulatory testosterone, luteinizing hormone (LH), and sex hormone-binding globulin (SHBG), and anthropometries were assessed at baseline and at the end of the study. **Results:** Following supplementation, quercetin significantly decreased resistin concentration (2.07 ± 0.23 vs. $2.88 \pm 0.40 \text{ ng/ml}$, $P < 0.001$) and mRNA level (0.64 ± 0.58 vs. 1 ± 0.56 fold change, $P = 0.008$), compared with placebo group. Moreover, testosterone (0.72 ± 0.15 vs. $0.76 \pm 0.12 \text{ ng/ml}$, $P = 0.001$) and LH (8.05 ± 2.88 vs. $8.77 \pm 1.99 \text{ mIU/ml}$, $P = 0.035$) concentrations were significantly lower in quercetin compared to placebo group. Fasting blood glucose ($P < 0.001$), insulin ($P = 0.02$) and HOMA-IR ($P = 0.009$) decreased within the quercetin group, however, no significant differences were observed compared to the placebo group ($P = 0.074$, $P = 0.226$, $P = 0.22$ respectively). **Conclusion:** Quercetin supplementation decreased resistin plasma levels and gene expression, and testosterone and LH concentration in overweight or obese women with PCOS.

کلمات کلیدی:

Polycystic Ovary Syndrome; Quercetin; Resistin; Obesity

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