

Effect of Resveratrol on Blood Lipids and Atherogenic Index in Rat Model of Polycystic Ovary Syndrome

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Abstract

Polycystic ovary syndrome is an endocrine disorder among women in reproduction age that is usually associated with insulin resistance and hyperlipidemia. Resveratrol is a natural polyphenol with antioxidant and cardioprotective effects. This study carried out to evaluate the effect of resveratrol on lipid profile and atherogenic index in a rat model of polycystic ovary syndrome. In this experimental study, 15 female Wistar rats (21 days of age) were divided into 3 groups (n=5): Control, polycystic rats, polycystic rats treated with resveratrol. To induction of polycystic ovary phenotype in the immature female rats, testosterone enanthate 1mg/100 g body weight was injected for 35 days subcutaneously. Then, resveratrol 10 mg/kg were injected intraperitoneally to rats of the polycystic group treated with resveratrol for 28days. Finally, the serum levels of total cholesterol and triglycerides, LDL-C, VLDL-C, HDL-C, glucose, and atherogenic index were measured. Treatment of animals in the polycystic model group with resveratrol significantly decreased the serum levels of LDL-C, atherogenic index and glucose and increased the serum HDL-C level. The results indicated that treatment of polycystic ovarian rats with resveratrol may improve the dyslipidemia status and may reduce the atherogenic index and blood glucose levels and may be an appropriate therapeutic agent for improve ment metabolic disorders associated with polycystic ovary syndrome.

Keywords: Lipid, Polycystic ovary syndrome, Resveratrol, Atherogenic index

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