

**P-74****Effects of Glycyrrhizic Acid (GA) in Glucose and Lipid Homeostasis in Pcos Female Rats**

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Polycystic ovarian syndrome (PCOS) is an endocrine problem causing female infertility in about 5-10% of women at their reproductive age. It has strong association with the disruption of normal menstrual cycle in patients, particularly the elevation of androgen level. The causal factors to hyperandrogenism in PCOS include hyperglycemia, hyperinsulinemia, obesity, dyslipidemia and elevated luteinizing hormone: follicle stimulating hormone (LH:FSH) ratio. The current major treatments to PCOS are aiming at the targets that lower the androgen levels, in which insulin-sensitizing agents are the most commonly prescribed drugs. However, serious side effects have been reported with the current drugs, with such drawbacks, the discovery of new drug is therefore inevitable. Glycyrrhizic acid (GA), a triterpenoid saponin isolated from licorice root, was fed *ad libitum* to Sprague-Dawley PCOS female rats with 100mg/kg for 30 days. GA treatment led to general improvement in the lipid profile ( $P<0.05$ ), serum glucose level ( $P<0.05$ ) and improvement in the estrous cycle of PCOS rats. In the lipid profile of PCOS rats, GA significantly lower triglyceride by 50.61%, followed by total cholesterol (29.04%). Serum glucose of GA-treated PCOS rats was reduced by 20.32% compared to non-GA treated PCOS rats. Besides, there were 55.55% of GA-treated PCOS rats showed normalization of estrous cycle after 30 days of treatment.

**Keywords:** Polycystic ovarian syndrome (PCOS), Glycyrrhizic acid (GA), Glucose, Lipid profile, Estrous cycle, Female rats.

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