

Relationship between Insulin resistance and serum concentration of Resistin and Insulin Like Growth Factor-I (IGF-I) association with induced polycystic ovary syndrome (PCOS) in female rats

Abstract

Abstract The present study was carried out to determine the relationship between resistin, Insulin Like Growth-I (IGF-I) and insulin resistance (IR) in female rats with induced Polycystic ovary syndrome (PCOS) model and assess their association. Twenty virgin rats were divided into two equal groups: Control group: included 10 rats were given single intramuscular injection(i.m) of 0.2mL pure corn oil for each rat. The second PCOS group: included 10 rats given single i.m of 4mg estradiol valerate dissolved into 0.2 mL pure corn oil for each rat. After 63 days were scarified and blood samples were collected from vena cava to obtain the serum for resistin, insulin, IGF-I , SHBG, FSH, LH, FSH and FT concentrations. The result revealed a significant increase in serum resistin, IGF-I, insulin, LH and FT concentrations in PCOS group in comparison with control group($P<0.05$), also a significant ($P<0.05$) decrease in SHBG concentration in PCOS group compared with control, while no significant difference was found in FSH concentration. The presence of insulin resistance may play an important role in the pathogenesis of increase of resistin and IGF-I in rat with induced PCOS.