

The polycystic ovary syndrome is one of the most common causes of infertility due to anovulation in women. In this study there were 105 women, 75 patients of whom were divided into three groups, (A) 30 women with diabetic mellitus type 2, (B) 30 women with polycystic ovary syndrome, (C) 15 women with diabetic mellitus type 2 and polycystic ovary syndrome and 30 women as a control group. In this entire group were analyzed serum fasting glucose, HbA<sub>1c</sub>, fasting insulin, IR, LH, FSH, lipid profile, and total anti-oxidant. The results show a significant increase in fasting insulin level, and insulin resistance in the type 2 diabetic patient group and DMT2+PCOS group compared to those of control. Also, there was a significant increase in the level of LH compared to those of control ( $p < 0.05$ ). Women with diabetic mellitus type 2 and polycystic ovary syndrome have high serum insulin levels and Luteinizing hormone. Insulin resistance and compensatory hyperinsulinemia can inhibit follicular development and ovulation.