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## Serum adiponectin level in infertile women with Polycystic Ovary Syndrome

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**Background:** Polycystic Ovarian Syndrome (PCOS) is a very prevalent disorder of metabolism and reproduction amongst women in their childbearing age. They are likely to suffer various conditions, such as obesity, insulin resistance; diabetes mellitus type II (DMII), cardiovascular disease (CVD), psychological disorders and infertility. Insulin resistance is widely common in females with PCOS at a ratio of 65–80, this number was independent of the body mass index of the individual Insulin resistance could only partly explain the serum level of adiponectin in lean females with PCOS. Adiponectin is one of the hormones implicated in the pathogenesis of PCOS, Adiponectin has antiatherogenic, antidiabetic, anti-inflammatory and insulin-sensitizing effects, adiponectin is inversely proportional in relation to the BMI in healthy individuals. The aim of this study was to evaluate the serum adiponectin level in infertile women with polycystic ovary syndrome.

**Materials and Methods:** This case-control study was conducted in the Department of Obstetrics and Gynecology, Mansoura University Hospital and the fertility care unit, Egypt. It included sixty infertile women (20 to 40 years) with the polycystic ovarian syndrome and thirty healthy fertile women without manifestation of PCOS who were recruited from the outpatient clinic from October 2016 to October 2017. The primary outcome measure was the relationship between the circulating adiponectin and the heterogeneity of the clinical and biochemical manifestations of PCOS

**Results:** Regarding the mean value of the adiponectin, there was a statistically significant difference between the control subgroups and the corresponding PCO subgroups. Regarding the anthropometric measurements (BMI & W/H ratio), the difference in the mean of weight, height, BMI, and waist/ hip ratio between the PCO a and C a was statistically non-significant (P-value >1.000). The difference between C a and PCO a in the biochemical measurements was statistically insignificant (P-value >0.05) with a significant elevation of LH, PRL, AMH, FBS, LH/FSH ratio in PCO subgroups

**Conclusion:** Adiponectin level was elevated which might aggravate the metabolic disorders, the irregular menstruation, and the infertility in PCOS females .Also higher levels of LH, PRL, AMH, FBS, and LH/FSH ratio were detected in PCOS patients.

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