

# Polycystic Ovarian Syndrome

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## THE WEIGHT REDUCTION IN ADOLESCENTS WITH POLYCYSTIC OVARIAN SYNDROME IS ASSOCIATED WITH INCREASE IN SERUM ADIPOLECTIN

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**Introduction:** Adiponectin is produced and expressed by adipose tissue, which is prevalent in Polycystic Ovarian Syndrome with increased Body Mass Index (BMI), Adiponectin has profound insulin – sensitizing, anti-inflammatory and anti-atherogenic effects.

Objective of the study is to investigate the association between weight reduction in obese adolescents with PCOS and adiponectin and TNF- $\alpha$  and C-R-P.

**Patients and Methods:** Twenty-seven adolescent women between 10 and 20 years with anovulation and hyperandrogenism were recruited from the outpatient clinic over a three year period September 1, 2014 to August 31, 2017. All had clinical evaluation including history and physical examination – weight and height and Body Mass Index. They were randomized into 3 treatment groups: Metformin only, Metformin and Exercise and Exercise only. Serum levels of adiponectin, TNF- $\alpha$ , and C-reactive protein were estimated by ELISA technique initially before treatment and repeated after 3 months of treatment.

**Results:** The features of oligomenorrhoea, high BMI and acne like in other parts of the world. All the three interventions resulted in weight reduction and regular menstruation in about 34% of the young women. Metformin with exercise had more significant effect in decreasing total 50% as compared to 28% with metformin only and 14% with exercise only. Similarly, Metformin with exercise had a more significant increase of adiponectin (3.42 Vs 8.48 P < 0.001) decrease of TNF- $\alpha$  (11.08 Vs 48.4 P < 0.020) and C-RP (20.8 Vs 11.4 P < 0.031).

**Conclusion:** Weight reduction in Obese adolescents with PCOS is associated with increased level of adiponectin and decrease levels of TNF- $\alpha$  and C-Reactive Protein.

**Key words:** Adolescent, Adiponectin, weight reduction, Metformin, Tumor Necrosis Factor Alpha.

### Biography

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