

## Effect of Metformin on single girl with polycystic ovarian syndrome

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### Abstract

**Introduction:** Polycystic ovarian syndrome (PCOS) is one of the most common endocrine diseases in women. This syndrome is characterized by hyperandrogenism, an ovulation, infertility and obesity. The recognition of insulin resistance as a principle factor in the pathogenesis of polycystic ovarian syndrome (PCOS) has lead to the use of insulin-lowering agents, also called 'insulin-sensitizing drugs, for its treatment. The use of metformin in this syndrome is one of the therapeutic option. The patients with this syndrome had long term sequel such as infertility, endometrial and breast cancer and cardio vascular disease, it is necessary to evaluate the effect of metformin on this complication.

**Materials and Methods:** The purpose of this study is to evaluate the role of metformin on clinical and Laboratory finding of single girl with polycystic ovarian syndrome. Between April 2001 to April 2002, 36 single girls who were considered to have clinical and sonographic findings of polycystic ovarian syndrome, were studied in Gynecology division of babol university of medical sciences they were treated with metformin 500 mg three times daily Hormonal assay (FSH, LH, DHEA, Testestrone, 17 OH progesterone, Estradiol) and biochemistry assay (TG, Cholestrol, HDL, LDL) and also clinical changes were monitored pre and post treatment.

**Results:** After treatment with metformin significant decrease in weight( $p=0.004$ ), BMI ( $p=0.006$ ) was seen. After treatment TG( $p=0.03$ ), LDL( $p=0.01$ ) was lowed and HDL ( $p=0.003$ ) was increased. Also we find a significant decrease in LH( $p=0.006$ ), Estradiol ( $p=0.005$ ), DHEA ( $p=0.001$ ) and Testostrone ( $p=0.001$ ).

**Conclusion:** Our results showed improvement in acne ( $P=0.02$ ) and hirsotism ( $P=0.026$ ). Our results showed remarkable effects of metformin in improvement of clinical and laboratory parameters. Therefore research of longer duration for effect of this drug would be necessary.

**Key Words:** Ovary, Poly Cystic Ovarian Syndrome, Metformin, Single girl, Hirsotism, Obesity, Irregular menstruation.

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