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Research Article

**EFFECT OF WEIGHT REDUCTION IN THE SYMPTOMATIC  
TREATMENT OF POLYCYSTIC OVARY SYNDROME**<sup>1</sup>Dr. Tanya Farid Khan, <sup>1</sup>Dr. Ghanwa Jadoon, <sup>2</sup>Dr. Sadia Ali<sup>1</sup>Pakistan Air Force Hospital Air Headquarters<sup>2</sup>Demonstrator in Biochemistry Department of Fatima Memorial Hospital and College of  
Medicine and Dentistry, Lahore**Abstract:**

*To research how the symptoms of PCOS are waived away by simple loss of weight and the possible etiology behind it, to assess its effectiveness in clinical trials and determine the success rate compared to other ways of conservative management.*

*Live recorded data from Gynecology department's faculty PAF hospital and PIMS hospital Islamabad. Excerpts from the article of JCEM & IJEM, excerpts from mayoclinic.org and PCOS forum and clinical endocrinology journal.*

*Controlled cross sectional study using a questionnaire paper among 300 patients turning up in professional gynecologist's OPD, who deal with this disease.*

*Out of 300 questionnaires, about 280 (93.3% ) stated that weight reduction is the first line of treatment and therefore helps in regulating menstrual cycle and increases the chances of conception .The rest of the 20 (7.7% ) were of the opinion that weight reduction is not directly related and has least to no effect .*

*Weight reduction & lifestyle modification does have a major role in the outcomes of PCOS during clinical course of treatment. Though a person can never be PCOS free but the symptoms can be successfully mitigated for better lifestyle.*

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**INTRODUCTION:**

Polycystic ovary syndrome (PCOS) has become an imminent cause of infertility and hirsutism in many women of reproductive age between 18 to 35. Given the growing incidence and worsening symptoms ranging between irregular menstrual cycles, failure to conceive, thick unnecessary body & facial hair, depressive moods and clinical evidence of cysts, with an adverse hormonal profile. Many researchers have gauged the aspects and etiology of this syndrome but no sure short satisfactory evidence behind the etiology has been documented. Many researches and journals state the key factor to be steroidal involvement and focal changes in sex hormone regularity. However, no solid evidence has been available to support the hypothesis.

**PATIENTS & METHODS:**

The study was conducted during the year August 2018-February 2019 at two tertiary hospital setups simultaneously, being, PAF hospital and PIMS hospital, Islamabad. Pre designed questionnaires were printed and distributed at the facilities' Gynae & Obs OPD respectively. The total number of patients' turning up for PCOS related issues was 300. They were educated on the issues and handed over a questionnaire to address their clinical severities and concerns related to PCOS. Some of them were silent asymptomatic and the rest of them were clinically affected patients. They were questioned about the first time the symptoms appeared and when in its course, they reached a peak. Any relieving or aggravating factors, if any, were also interrogated. Ultrasonographic evidence and hormonal profile correlation in supporting diagnosis was thoroughly studied. Symptoms like onset of menstrual irregularities, acne, linea nigricans and hirsutism were investigated. They were then kept under observance and divided on symptom-wise severity into 2 groups. Those that controlled their symptoms via life style modification, weight loss & healthy organic diet versus those treated with OCPs. All the data was documented in the follow up visits. Those that didn't come for follow ups were reviewed telephonically.

Lean and asymptomatic PCOS patient were also included in the study. However, Patients with Adrenal tumors and extrinsic androgen producing tumors were excluded from the study given the complete change of etiology.

**DISCUSSION:**

The results derived from the response via questionnaire strongly manifest the key role involvement of weight reduction in the symptomatic treatment of PCOS. As is evident, 93.3% patients found their symptoms were relieved

when they adopted a healthier lifestyle and applied a lifestyle modification on themselves, motivated themselves to lose weight and reached an ideal BMI. Compared to 6.7% of the other half that felt conventional treatment with OCPs helped them mitigate their symptoms to minimal. Analysis of waving off symptoms like controlled BSR range, regularity of periods, cured depression and anxiety along with high incidence of conception was documented once patient shed weight to their ideal BMI. Patient found themselves more active and less depressive. An estimated 20 to 25 % patient turn out with reference to PCOS showed up in the Gynecological department over the year. It was noted the mean age group was between 20 to 32 years of reproductive age. Among sedentary lifestyles, fast food consumption and a bit of genetic predisposition, weight gain was marked the top of the line cause for PCOS in young girls of reproductive age. It proved beneficial and more effective than OCPs with minimal side effects as opposed to OCPs. Patients advised to exercise, quit junk food, minimalizing the use of poultry farm raised, steroid injected chicken and eggs were seen to improve drastically in symptoms. Many researchers have tried gauging the cause of PCOS but could not establish one sure short cause. Many abstract ideas flew in from probability of excess insulin resistance, low grade inflammation, excess androgen levels and hereditary causes being the underlying features to be suspected. Interestingly, each cause imparts a specific clinical symptom. To name some, excess insulin resistance leads to infertility and a surge in Androgen production. In general, the symptoms ranged from infertility, irregularity of periods, hirsutism, acne and obesity.

Talking about long term untreated

PCOS, the complications are

Premature birth, infertility, GDM, type 2 DM, Metabolic Syndrome, abnormal uterine bleeding, culminating in Uterine Cancer. However, consensus was achieved that PCOS is defined by the remarkable alterations in steroid genesis with relevance to production by ovaries, adrenal and extra glandular contribution. An investigation triad was set as standard whereby even 2 out of 3 prevalent symptoms depict the degree of PCOS ongoing i.e.

- 1: Discovering few to multiple cysts in ovaries on USG
- 2: Blood reference ranges for sex hormone profile altered with LH-FSH ratio 2:3 or greater and
- 3: Established oligomenorrhea with intermittent phases of adversely disturbed cycle. Studies have reported that given the enigmatic nature of PCOS sequel, it can only be treated symptomatically in the order to lessen their severity but cannot be entirely cured. However studies are ongoing as of

now but are met with limited success to completely render patient PCOS free for life.

#### CONCLUSION:

Weight reduction appears to relieve most of the symptoms of PCOS. Insulin resistance, irregularity of periods, Ovulation, conception, anxiety and acne had better outcomes compared to Hirsutism and Baldness. The latter two were treated with dermatological interventions. Despite its clinical limitations, majority of patient felt satisfied with the outcome of Weight reduction & appetite control in the clinical course of PCOS.

#### RESULTS:

Out of 300 patients, 245 reported with complaints of weight gain, An ovulation, and irregular periods while the rest of the 65 reported specifically for hirsutism and Obesity – related acne. They were put on two streamline treatments OCPs Vs lifestyle modification and were called for follow ups between 3, 6 and 9 months interval. The results depicted that a drastic weight loss of 10 to 15 Kg proved boomerangingly beneficial in 280 out of 300. With incidence of conception at 3 months of follow

up as much as 29% and at 6 month 43%. Settling of irregular cyclical patterns, controlled BSR and oligomenorrhea. Relief from mood swings, scanty hair production at affected areas and acne were seen to recover on their own. More active lifestyle approach was adopted. As for severe Alopecia and Hirsutism, laser assisted intervention proved beneficial.

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