



A Case Study of Polycystic Ovary Syndrome in a 27-Year-Old Female Presenting with Hirsutism, Weight Gain, Irregular Menstruation, and Primary Infertility.

AUTHORS

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Abstract

Polycystic Ovary Syndrome (PCOS) is one of the most common endocrine disorders affecting women of reproductive age and is characterized by menstrual irregularities, hyperandrogenism, obesity, and infertility.⁽¹⁾ This case study presents a 27-year-old female who attended the gynecology outpatient department with complaints of irregular menstrual cycles, excessive facial hair growth (hirsutism), weight gain, and primary infertility for the past 3 years. Clinical examination and investigations, including hormonal profile and ultrasonography, confirmed the diagnosis of PCOS. The patient was managed with a combination of lifestyle modifications, dietary regulation, weight management strategies, and ayurvedic formulation Tab PCOSTA with Tab PCOSHERB.⁽²⁾ Regular follow-up demonstrated improvement in menstrual regularity, reduction in hyperandrogenic symptoms, and overall reproductive health. This case highlights the importance of early diagnosis, comprehensive management, and patient counseling in achieving favorable outcomes in PCOS.

Keywords: Polycystic Ovary Syndrome, Primary Infertility, Hirsutism, Irregular Menstruation, Obesity, Hyperandrogenism

Introduction

In this universe women are the most essential factor of the continuity of human race. Women have been gifted with the power of creation. This is why, woman is considered as the reflection of god. And for that fertility is the most important issue for women and women's fertility depends upon good quality of Artava and sound health.

Sound health can be achieved only when all the physiological processes in body are in equilibrium. But nowadays there are many physiological changes seen in each stage of her life, especially in reproductive stage and these changes in physical and mental wellbeing profoundly affects menstrual cycle. In this modern era, the sedentary life, faulty food habits, stress, lack of physical exercise etc. affects the health of a woman & Ultimately it leads to menstrual abnormalities.

In last two decades women are suffering more commonly from hormonal imbalance which is leading to menstrual abnormalities.

Among these PCOS has become the serious condition which is affecting women's reproductive health.

Polycystic ovary syndrome is a complex condition characterized by elevated Androgen levels, menstrual irregularities, and/or small cysts on one or both ovaries.⁽³⁾

The disorder can be morphological (polycystic ovaries) or predominantly biochemical (hyperandrogenemia).

Hyperandrogenism, a clinical hallmark of PCOS, can cause inhibition of follicular development, microcysts in the ovaries, anovulation and menstrual changes.⁽³⁾ It affects approximately 6–20% of women in the reproductive age group and is one of the leading causes of infertility.⁽⁴⁾ Common clinical manifestations include irregular menstrual cycles, obesity, hirsutism, acne, and metabolic abnormalities.⁽⁵⁾

Case Presentation

Patient Information

- Age: 27 years
- Sex: Female
- Marital Status: Married
- Occupation: Homemaker
- Chief Complaints:
 - Irregular menstruation for 5 years
 - Excessive facial hair growth for 3 years
 - Weight gain for 4 years
 - Inability to conceive despite regular unprotected intercourse for 3 years

History of Present Illness

The patient reported irregular menstrual cycles since last five years, with cycle intervals varying from 60 to 120 days. Menstrual flow was moderate and lasted 4–5 days. She noticed progressive facial hair growth over the upper lip, chin, and sideburn regions. The patient also experienced a weight gain of approximately 12 kg during the previous four years despite no significant dietary changes.

She had been married for three years and was unable to conceive despite regular unprotected coitus.

Past History

- No history of diabetes mellitus
- No thyroid disorders
- No previous pelvic surgery
- No history of tuberculosis
- Mother diagnosed with Type 2 Diabetes Mellitus
- Elder sister diagnosed with PCOS

Personal History

- Mixed diet
- Sedentary lifestyle
- Appetite normal
- Sleep adequate
- Bowel and bladder habits normal

Obstetric History

Gravida Para Abortion Live

G0 P0 A0 L0

Clinical Examination

General Examination

- Height: 160 cm
- Weight: 82 kg
- BMI: 32.0 kg/m²
- Pulse Rate: 78/min
- Blood Pressure: 120/80 mmHg

Physical Findings

- Obesity present
- Hirsutism noted over upper lip, chin, chest, and lower abdomen
- Mild acne over face
- Acanthosis nigricans present around neck folds



Systemic Examination

Cardiovascular, respiratory, and neurological examinations were within normal limits.

Gynecological Examination

- External genitalia normal
- Cervix healthy
- Uterus normal size and anteverted
- No adnexal tenderness

Investigations

Laboratory Findings

Investigation	Result
Hemoglobin	12.4 g/dL
Fasting Blood Sugar	102 mg/dL
Serum Testosterone	88 ng/Dl
LH	14.5 IU/L
FSH	5.2 IU/L
LH Ratio	2.8:1
TSH	2.4 mIU/L
Serum Prolactin	Normal

Ultrasonography Findings

- Bilateral enlarged ovaries
- Multiple peripheral follicles measuring 2–9 mm
- Increased stromal echogenicity
- Typical "string of pearls" appearance



Diagnosis

The diagnosis of Polycystic Ovary Syndrome was established according to the Rotterdam Criteria:

1. Oligo/anovulation (present)
2. Clinical hyperandrogenism (present)
3. Polycystic ovaries on ultrasound (present)

Final Diagnosis: Polycystic Ovary Syndrome with Primary Infertility.

Treatment

Lifestyle Modification

- Calorie-restricted balanced diet
- Regular aerobic exercise for 45 minutes daily
- Weight reduction counseling
- Stress management

Medical Management

- Tab P-costa 515mg (2 BD) for 45 days followed by Tab Pcos-herb 500 mg (2BD) for 135 days .
- Tab P-costa from 5th day of first cycle of treatment for consecutive 45 days followed by Tab P-cos heab for next consecutive 135 days.
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Follow-Up

parameters	After 1 Months	After 2 Months	After 3 Months	After 4 Months	After 5 Months	After 6 Months
weight	Weight reduction of 1 kg	Weight reduction of 2 kg	Weight reduction of 3 kg	Weight reduction of 4 kg	Weight reduction of 6 kg	Weight reduction of 8 kg
Menstrual cycle	Mentrua cycles improved to 60-120 days	Mentrua cycles improved to 90-120 days	Mentrua cycles improved to 90-60 days	Mentrua cycles improved to 60-45 days	Mentrua cycles improved to 30-45 days	Mentrua cycles improved to 30-35 days
Hirsutism	Mild reduction in hirsutism	Mild reduction in hirsutism	Mild reduction in hirsutism	Mild reduction in hirsutism	reduction in hirsutism	reduction in hirsutism
Acne	Mild reduction in acne	Mild reduction in acne	Mild reduction in acne	Mild reduction in acne	reduction in acne	reduction in acne

Discussion

PCOS is a multifactorial disorder associated with insulin resistance, obesity, and hyperandrogenism. The patient's clinical presentation of obesity, hirsutism, menstrual irregularities, and infertility is typical of PCOS. Early diagnosis and multidisciplinary management involving lifestyle intervention and pharmacological therapy are crucial to improve fertility outcomes and prevent long-term complications such as diabetes mellitus and cardiovascular disease.

Conclusion

This case highlights the importance of comprehensive evaluation of women presenting with irregular menstruation, hirsutism, obesity, and infertility. Early diagnosis of PCOS and appropriate management can significantly improve reproductive and metabolic outcomes and enhance quality of life

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