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A Clinical Case Presentation of Polycystic Ovary Syndrome in a Reproductive-Age Woman

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Abstract

Polycystic Ovary Syndrome (PCOS) is one of the most common endocrine disorders affecting women of reproductive age. It is characterized by menstrual irregularities, hyperandrogenism, and polycystic ovarian morphology. PCOS is associated with metabolic disturbances, infertility, obesity, and psychological issues. This case report presents a 24-year-old female diagnosed with PCOS based on clinical features, hormonal assessment, and ultrasonographic findings.

Early diagnosis and comprehensive management improved her menstrual regularity and overall health outcomes.

Keywords: Polycystic Ovary Syndrome, Hyperandrogenism, Menstrual Irregularity, Infertility, Polycystic Ovaries

I. INTRODUCTION

Polycystic Ovary Syndrome (PCOS) is a heterogeneous endocrine disorder affecting approximately 6 – 20% of women of reproductive age worldwide. The Rotterdam criteria (2003) are commonly used for diagnosis and require the presence of at least two of the following: oligo/anovulation, clinical or biochemical hyperandrogenism, and polycystic ovarian morphology on ultrasound. The condition is associated with insulin resistance, obesity, metabolic syndrome, infertility, and an increased risk of type 2 diabetes mellitus.

II. Case Presentation

Patient Information

A 24-year-old unmarried female presented to the gynecology outpatient department with complaints of irregular menstrual cycles for the past 3 years, excessive facial hair growth, and weight gain.

Chief complaints

- Irregular menstruation since 3 years
- Excessive facial hair growth
- Weight gain of approximately 8 kg over 2 years
- Occasional acne
- Menstrual History
- Menarche at 13 years of age
- Menstrual cycles occurring every 45 – 60 days
- Moderate menstrual flow lasting 4 – 5 days

Family History

- Mother diagnosed with type 2 diabetes mellitus
- No family history of endocrine disorders

Physical Examination

- Height: 160 cm
- Weight: 72 kg
- BMI: 28.1 kg/m²
- Blood Pressure: 120/80 mmHg
- Mild acne present
- Hirsutism noted with Ferriman-Gallwey score of 10

Investigations

Laboratory Findings
Parameter
1H.B
Result 12.4 g/dL
Normal Range 12 – 15 g/dl 2.
2. Fasting Blood Sugar
96 mg/dL
Normal range 70 – 100 mg/dL
3.TSH
2.5 mIU/L
Normal range 0.4 – 4.0 mIU/L
4. Serum Testosterone
Mildly Elevated LH
12 IU/L FSH
5 IU/L
LH:FSH Ratio
2.4:1

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Ultrasonography
Pelvic ultrasonography revealed:
Bilaterally enlarged ovaries
Multiple peripheral follicles (12 or more follicles measuring 2 – 9 mm) Increased ovarian stromal volume

Diagnosis
Based on the Rotterdam criteria, the patient was diagnosed with Polycystic Ovary Syndrome (PCOS).

Management
- The patient was advised:
- Lifestyle modification including diet and exercise.
- Weight reduction strategies.
- Combined oral contraceptive pills for menstrual regulation.
- Metformin therapy for insulin resistance.
- Counseling regarding long-term complications and fertility concerns.

FOLLOW - UP
1. After six months of treatment:
2. Menstrual cycles became regular (30 – 35 days).
3. Weight reduced by 5 kg.
4. Improvement in acne and hirsutism was observed.
5. Patient reported improved quality

Internal Medications
1. Kanchanar Guggulu
2 tablets (500 mg each) twice daily after meals with lukewarm water.

2. Varunadi Kashaya
15 ml with equal quantity of warm water twice daily before meals.

3. Kumaryasava
20 ml with equal quantity of water twice daily after meals.

4. Shatapushpa Churna
3 g twice daily with warm water after food.

5. Rajahpravartini Vati
2 tablets twice daily for 5 days before the expected menstrual date (when indicated in amenorrhea/oligomenorrhea).

III. DISCUSSION

PCOS is a multifactorial disorder involving genetic, environmental, and hormonal factors. Insulin resistance plays a central role in its pathogenesis. Women with PCOS frequently present with menstrual irregularities, obesity, acne, and hirsutism. Early diagnosis and multidisciplinary management are essential to prevent long-term complications such as infertility, metabolic syndrome, cardiovascular disease, and type 2 diabetes mellitus.
Lifestyle modification remains the cornerstone of management. Pharmacological treatment should be individualized according to symptoms and reproductive goals.

IV. CONCLUSION

PCOS is a common endocrine disorder that significantly impacts reproductive and metabolic health. Early recognition and appropriate management can improve symptoms, restore menstrual regularity, and reduce long-term health risks. This case highlights the importance of a comprehensive approach including lifestyle modification, pharmacotherapy, and regular follow-up.

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