

ORIGINAL ARTICLE

Clinical Profile of Patients with Polycystic Ovary Syndrome at Tertiary Care HospitalSEEMA RAFIQ¹, SOFIA SHAH², ASIA ASGHAR³¹Medical Officer, FCPS Obstetrics and Gynaecology, (Health department), District Kohat²Medical Officer, Diploma in Gynaecology and Obstetrics, (Health department), District Malakand³Medical Officer, FCPS Obstetrics and Gynaecology, (Health department), District AbbottabadCorresponding author: Seema Rafiq, Email: kmu3780@gmail.com**ABSTRACT**

Polycystic ovary syndrome, with an incidence of up to 10%, is one of the communal causes of anovulation in females of reproductive age. Diagnostic criteria for PCOS include enlarged polycystic ovaries, obesity, hirsutism, and oligomenorrhea. These women are more susceptible to endometrial cancer, type II diabetes, dyslipidemia and premature atherosclerosis.

Objective: The aim of this study was to determine the different clinical profiles of PCOS patients and to educate patients about the long-term outcomes related with this condition.

Methods: This cross-sectional study was conducted at the obstetrics and gynaecology department of Ayub Teaching Hospital, Abbottabad for the duration from 1st January 2019 to 31st December 2019. The study included 110 people with oligomenorrhea, obesity, acne, infertility and hirsutism. Young women who had their menarche less than two years ago, women over 45 years of age, and patients receiving exogenous estrogen or progesterone therapy were excluded from the study. For the social sciences, data was entered and analyzed with SPSS 25.0. The percentages and mean values were determined for several parameters.

Results: Of the 110 patients selected for this study, 46 (41.8%) were married and 64 (58.2%) were unmarried. In contrast to rural areas, there were more patients from urban areas (63.6% vs 36.4%). 6.4% of patients were underweight, 20% and 59.1% were overweight and obese. Most patients (71.8%) had oligomenorrhea or amenorrhea. 70% of patients gained weight, many of whom attributed this to menstrual problems. Infertility affected 30% of married patients. Hirsutism and acne were found in 21.8% and 25.5%, respectively. Acanthosis Nigricans, a manifestation of insulin resistance, was found in 31.8% of patients. Eight patients were taking medication for hyperprolactinemia, ten women (10%) had type 2 diabetes taking oral hypoglycemics for glycemic control, and six had hypertension. All patients underwent USG and 85 (77.3%) of them showed a characteristic necklace pattern of follicular arrangement.

Conclusion: Using clinical features and ultrasonography in women, PCOS can be accurately diagnosed using the Rotterdam criteria. The two main findings we observed in our patients were weight gain and amenorrhea or oligomenorrhea. It is very important to inform and educate unmarried patients with PCOS about the relationship of this condition with infertility and chronic health problems.

Keywords: Oligomenorrhea, PCOS, Anovulation and obesity

INTRODUCTION

Polycystic ovary syndrome, with an incidence of up to 10%, is one of the communal causes of anovulation in females of reproductive age. Diagnostic criteria for PCOS include enlarged polycystic ovaries, obesity, hirsutism, and oligomenorrhea. These women are more susceptible to endometrial cancer, type II diabetes, dyslipidemia and premature atherosclerosis².

Polycystic ovary syndrome is the communal causes of anovulation in females of childbearing age, with an incidence of up to ten percent³. The prevalence of PCOS among Pakistani women is increasing and manifests itself in many different ways⁴. The symptom complex associated with anovulation was first documented in 1935 by Michael L. Leventhal and Irving F. Stein⁵⁻⁶. Diagnostic criteria for PCOS included obesity, hirsutism, and enlarged polycystic ovary. It is now known as a heterogeneous condition that results in an excess of androgens mainly from the ovaries and is related with resistance of insulin⁷⁻⁸. It has a complex clinical picture and includes the triad of hirsutism, obesity and oligomenorrhea. In 1921, Archard and Thiers' reports famous bearded diabetic woman who was first recognize with glucose intolerance and hyperandrogenism⁹⁻¹⁰. The infertility, amenorrhea, hyperandrogenemia features, symptoms of metabolic disorders such as dyslipidemia, insulin resistance may be the symptoms of PCOS¹¹. These females are more susceptible to endometrial cancer, dyslipidemia, type II diabetes and premature atherosclerosis.

The aim of this study was to determine the different clinical profiles of PCOS patients and to educate patients about the long-term outcomes related with this condition.

METHODS

This cross-sectional study was conducted at the obstetrics and gynaecology department of Ayub Teaching Hospital, Abbottabad

for the duration from 1st January 2019 to 31st December 2019. The study included 110 people with obesity, oligomenorrhea, infertility, hirsutism and acne. Young women who had their menarche less than two years ago, women over 45 years of age, and patients receiving exogenous estrogen or progesterone therapy were excluded from the study. PCOS was labeled based on the occurrence of minimum two criteria including clinical, hormonal and abdominal ultrasound. Study participants were women who had amenorrhea, oligomenorrhea, showed signs of hyperandrogenism, and had abdominal ultrasound that revealed minimum 12 follicles (diameter of 2 to 9 mm) arranged peripherally around the ovarian stroma dense core or scattered in the stroma at increased amount. The marital status, menstrual history, and number of births were recorded. The diagnosis was confirmed by a senior radiologist along with consultation from the gynaecologist. The Institutional Review Board approved the study. BMI was defined as underweight if <18.5 kg/m², overweight 25.0-29.9 kg/m², normal 18.5-24.9 kg/m², if there is 30-34.9 kg/m² BMI will be classified as Class I obesity, if BMI is 35-39.9 kg/m² will be labeled as class II obesity and if BMI >40 kg/m² will be classified as class III obesity. The modified Ferriman-Gallwey score was applied to assess the Hirsutism and its Severity was graded as follows: less than 4 will be labeled as mild Hirsutism, 4-7 scores as moderate Hirsutism, and ≥8 will be definite as severe. For the social sciences, data was entered and analyzed with SPSS 25.0. The percentages and mean values were determined for several parameters.

RESULTS

Of the 110 patients selected for this study, 46 (41.8%) were married and 64 (58.2%) were unmarried. In contrast to rural areas, there were more patients from urban areas (63.6% vs 36.4%). 6.4% of patients were underweight, 20% and 59.1% were overweight and obese.

Table-1: shows the patients characteristics

Characteristics	No	%age
Married	46	41.8%
Unmarried	64	58.2
Total	110	100%
Rural area	70	36.4
Urban area	40	63.6

Table-2: shows the patients distribution with reference to BMI

BMI	Numbers	%
<18.5; underweight	7	6.4
18.5-24.9; Normal	16	14.5
25-29.9; Overweight	22	20
>30; Obese	65	59.1
Total	110	100

The maximum of the patients (33.6%) were 30-35 years of age, with 32.20 years of mean age at presentation.

Table-3: shows the patients distribution with reference to age group

Age group	Numbers	Percentage
20-25	14	12.7
25-30	29	26.4
30-35	37	33.6
35-40	24	21.8
40-45	6	5.5
Total	110	100

Distribution of patients by symptoms: Most patients (71.8%) had oligomenorrhea or amenorrhea. 70% of patients gained weight, many of whom attributed this to menstrual problems. Infertility affected 30% of married patients. Hirsutism and acne were found in 21.8% and 25.5%, respectively.

Table-4: shows the patients clinical features

Symptoms	Numbers	Percentage (%)
Infertility	33	30
Acne	28	25.5
Hirsutism	24	21.8
Weight gain	77	70
Acanthosis Nigricans	35	31.8
Oligo or Amenorrhea	79	71.8

Acanthosis Nigricans, a manifestation of insulin resistance, was found in 31.8% of patients. The hypothyroidism was noticed in 19 women (17.3%) and received the treatment. Eight patients were taking medication for hyperprolactinemia, ten women (10%) had type 2 diabetes taking oral hypoglycemics for glycemic control, and six had hypertension.

All patients underwent USG and 85 (77.3%) of them showed a characteristic necklace pattern of follicular arrangement.

DISCUSSION

In this analysis, the clinical presentation of females identified with PCOS conferring to the criteria of Rotterdam was assessed. Most of the patients in our study were under the age of 35, suggesting that PCOS is most common among younger people. It was common amongst urban residents due to the absence of knowledge among rural residents and the unavailability of radiologists and gynaecologists in the remote area to diagnose them. Regular periods are the result of normal ovulation (cycle 28-35 days)¹². The pathognomonic feature of PCOS that causes irregular menstrual cycles is anovulation. In contrast to biochemical variables, chronic irregular periods (due to anovulation) appear to be a stronger predictor¹³⁻¹⁴. One of the diagnostic criteria for PCOS is oligomenorrhoea¹⁵. 71.8% of participants in the current study reported amenorrhea or oligomenorrhea. Similar to our study, Balen et al. They found that 72% of PCOS patients experienced menstrual disorders¹⁶. The most common among them was oligomenorrhea (60%), trailed by amenorrhea (11%). In the current study, 82% of married females with PCOS reported having problems getting pregnant. Infertility has been categorized as one

of the long-term effects of PCOS by Pfeifer SM¹⁷. Women with PCOS often experience obesity and increases the likelihood of metabolic disorders¹⁸. The presence of varying degrees of obesity worsens insulin resistance. It's not compulsory that if u have obesity, you are diagnosed with PCOS. According to the study results, both non-obese (14.5%) and obese (59.1%) participants had PCOS. Obesity in developing countries is mostly because of a sedentary lifestyle, consumption of high-calorie foods and lack of exercise¹⁹. Currently in Pakistan, there is an increase in the number of middle-class people who are progressing towards the obesity²⁰. PCOS patients are often obese²¹. In a meta-analysis and systemic review by Lim et al, women with PCOS are more probable to be overweight and obese²²⁻²³. A limitation of the study was the limited sample size, which prohibited analysis of hormones in all subjects. Instead, radiological and clinical criteria were considered for the PCOS diagnosis.

CONCLUSION

According to the Rotterdam criteria, the PCOS diagnosis in women can be accurately predicted by clinical features and ultrasound. The two main findings we observed in our patients were weight gain and amenorrhea or oligomenorrhea. It is very important to inform and educate unmarried patients with PCOS about the relationship of this condition with infertility and chronic health problems. Although PCOS often involves obesity, it can also occur in women who are not obese. Since very few patients are aware of their high BMI and skin discoloration, there is a need to increase awareness of the contribution of obesity and acanthosis nigra in PCOS. The most important factor contributing to female infertility is polycystic ovary syndrome.

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