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ORIGINAL ARTICLE

Incidence and Clinical Presentation of Polycystic Ovarian Syndrome in a Tertiary Care Hospital

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ABSTRACT

Aim: To determine Incidence of Polycystic Ovarian Syndrome and its clinical presentation in a tertiary care Hospital.
Study Design: A Cross sectional study.
Place and duration of study: The study was conducted in the Department of Obs. & Gynae, Avicenna Medical College and Hospital, Lahore for a period of six months, January 2020 to June 2020.
Methodology: A total of 753 patients attending the gynecological outpatient department were included in the study. Among these the women presenting with clinical picture of menstrual irregularities weight gain, hirsutism and subfertility were evaluated for diagnosis of PCOS. Radiological findings by pelvic U/S were confirmed.
Results: 169 women out of 753 patients were found to have PCOS. The incidence was thus 22.44%. Maximum number of women were overweight, BMI (25-29.9Kg/m2). 113(66.86%) presented with oligomennorrea followed by hirsutism and amenorrhea. 57.1% of married women with PCOD had subfertility.
Conclusion: Polycystic ovarian Syndrome is common in our population. It is more frequently seen in unmarried obese women. Menstrual irregularity is the most common clinical presentation. Ultrasound criteria is a valuable tool to diagnose the Polycystic Ovarian Disease.
Keywords: Polycystic 0varian Syndrome, oligomenorrhoea, amenorrhoea, hirsutism, obesity.

INTRODUCTION

Polycystic ovarian syndrome is a multisystem disorder. It is an ovarian malfunction with androgen excess and anovulation[1,2]. Incidence of Polycystic ovarian disease is 2.2-26% as reported in literature[2]. A large number of women with its sign and symptoms present in gynae OPD. But the incidence is unknown in our society. Its clinical picture varies from menstrual irregularities to hirsutism, weight gain and infertility[3]. Patients may present a wide range, being asymptomatic, to having multiple gynaecological, dermatological or metabolic manifestations[4] In daily clinical practice it is diagnosed using the clinical criteria. Then patients are subsequently evaluated with radiological and biochemical investigations. It is confirmed by using Rotterrdam criteria[4]. Rotterdam Criteria broadened its definition, women to have at least two of the following: oligo-ovulation or anovulation, clinical or biochemical signs of hyperandrogenism, and/or polycystic ovarian morphology[5]

Although signs and symptoms can be found in the adolescents as well but many a times it is difficult to confirm the diagnosis. Menstrual irregularities are not uncommon in the two years following menarche and can be hard to differentiate from the oligo anovulation that characterizes Poly cystic ovarian disease[6]. PCOD is found more commonly in overweight women but can also present in lean women. There are endocrine and metabolic differences in overweight and lean phenotypes[7,8].

The present study deals with the incidence and clinical presentation of PCOD in patients following in Gynae OPD of a tertiary care hospital.

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METHODOLOGY

It is a prospective cross sectional study lasting for a period of 6 months, conducted at Avicenna Hospital Lahore, from January 2020 to June 2020 after approval from Ethical Coard. This study includes patients following in Gynae OPD with cardinal features of menstrual irregularities, weight gain, hirsutism, acne and infertility. It includes all females with above presentations in reproductive age group. Patient with other endocrine disorders are excluded from the study. Patient's information including demographic data and clinical features are recorded on a predesigned Performa. Her BMI is calculated. Patient is further investigated using radiological and biochemical criteria. Percentage of patients who are found to have positive radiological findings is also noted. Data is analyzed using SPSS.

RESULTS

A total of 753 patients attended the gynecological OPD in 6 months and 169 were found to have PCOS thus prevalence of PCOS was found to be 22.44%. Patients belonged to the age group from 21 to 36 years. Among these 103(61%) were unmarried and 66(39%) were married. BMI was calculated for all the patients with a range from 18.5kg/m^2 to 30 and greater. Highest number of patients, 102(60.35%) were from the overweight group, BMI (25-29.9 kg/m^2).

Maximum number of patients presented with menstrual irregularities 113(66.86%) followed by hirsutism 44(26%) and 12(7.10%) had amenorrhea. Although acne was not one of the presenting complaints but was found to be in 25(15%) of the women. Unfortunately one of another very distressing outcome of PCOS, subfertility was found in

38(57.1%) of married patients which is quite a large number in married population of PCOD women. Not only the clinical presentation of PCOS is evident as the results indicate but the confirmatory positive radiological findings on pelvic ultrasonography were also found in 113(77%) of women.

Table 1. Total number of patients with PCOD (n=169)

Patients attending Gynae OPD		With PCOD	%ages
Total Patient	753	169	22.44
Married		66	39
Un Married		103	61

Table 2: Distribution of Patients According to Age Group

Age groups	n	%age
21—25 years	66	39
26-30 years	59	34.91
31-36 years	44	26

Table 3: Distribution of Patients According to BMI (n=169)

BMI kg/m^2	n	%age
Normal wt (BMI 18.5- 24.9)	17	10.59
Over wt (BMI 25-29.9)	102	60.35
Obese (30 and greater)	50	29.58

Table: 4 Clinical presentation of PCOS

Presentation	n	%age
Menstrual irregularities	113	66.86
Amenorrhea	12	7.10
Hirsutism	44	26

Fig. 1: Patients with PCOS

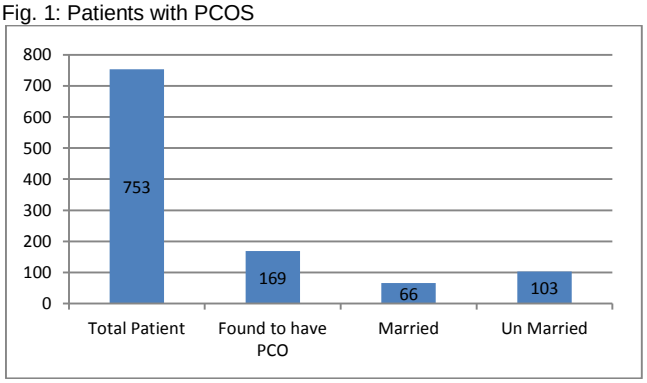
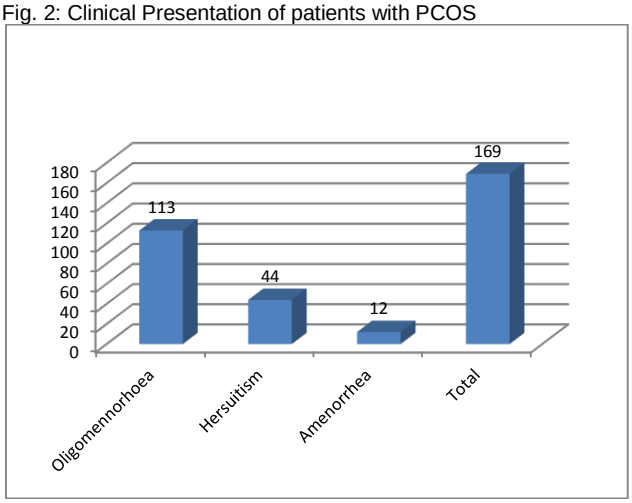


Fig. 2: Clinical Presentation of patients with PCOS



DISCUSSION

PCOS is a syndrome of ovarian dysfunction along with the cardinal features of hyperandrogenism and polycystic ovarian morphology. Clinical manifestations include menstrual irregularities, signs of androgen excess (e.g. hirsutism and acne) and obesity.

The incidence of PCOS is found to be 22.44% in the current study. It is comparable to the study conducted by Ehrmann DA[2] which shows a wide range from 2.2–26%. According to M. Akram[9] prevalence of PCOD in South Asian women is high, especially in Pakistani women which is around 52%. This high incidence is attributed to genetic, environmental factors and intermarriages. But Kumarpeli et al[10] found the prevalence of 6.3% in South Asian women according to Rotterdam Criteria in the age group, 15 to 39 years. Wendy M[11] reported the incidence of 3-10% in his study. According to Davis et al[12] the prevalence of polycystic ovary disease was 26%. It was the study done in indigenous Australian women depending on the presence of oligohypomenorrhea, hirsutism and hyperandrogenism. Our study and the study of Davis et al both had small sample size and both studies evaluated the presence of clinical sign and symptoms.

In our study 73.96% women had menstrual irregularities, 66.86% and 7.10% had oligohypomenoorhea and amenorrhea respectively. In the study of Shilpa S[13] 85% had irregular periods, it was conducted in a large number of Caucasian population thus it is comparable to our study. Farida Wagan[14] concluded that 69.83% women presented with menstrual irregularities, 31.74% had oligomennorhea and 22.22% had amennorhea. While Kausar M et al[15] also figured out that menstrual irregularity is the most common symptom in younger age women with PCOS.

Infertility is the tip of iceberg in PCOS. It is found to be present in 57.1% of married women. Shilpa[13] and Anju E et al[19] mentioned an incidence of as high as 74.98% and 72% respectively. Kausar M et al[15] claimed it as the most common presentation in married women. Keeping in view the research of Anju E et al[19], which was conducted in the general community in Australia, women were selected randomly from national public selection database. This high prevalence could be because a large number of these women self reported for PCOD. PCOD being the leading cause of infertility in them as well, thus may have led to this over presentation.

Hirsutism and acne result from the effect of hyperandroginism in PCOS. It affected 26% of our study population. As reported in literature[16,17,18] also, unfortunately a very large percentage of women suffered from hirsuitism, which is a seen as a very distressing feature of PCOS. Acne was found in 15% of our study population while 18% of the subjects had moderate to severe acne, Shilpa[13].

In the current study 60.35% women were overweight (BMI 25-29.9) while 29.58% were obese. In the study of Farida[14] 74% were overweight, and 6.34% were obese. Among the patients with PCOS, Saista S G[17] also found that 64.5% were obese and 24.2% were overweight. Thus it proves that PCOS is more common in obese women[8,10,15] with a relatively lesser number is found in thin lean women. Obesity is not only a risk factor but is responsible for

worsening of the condition as well. Thus weight reduction and a resulting fall in peripheral Insulin resistance would definitely lead to accelerated success rates and minimizing disease progression[7].

77% patients in our study have positive sonological findings of polycystic ovary. In a Saudi study[17] 97% of patients with PCOD were found to have 12 or more 2-9mm follicles and 89% had peripheral distribution of follicles. Advanced sonological equipment and expertise may have contributed to more accurate findings. These figures undoubtedly establish pelvic ultrasound as an important diagnostic tool for confirmation of PCOD[5,7].

CONCLUSION

The incidence of Polycystic Ovarian Syndrome is on its rise in our society affecting women of all ages in reproductive period. Presenting with the distressing symptoms of weight gain, hirsuitism and subfertility, naming a few. Life style modification, weight reduction with diet and exercise is the corner stone in its management. Public health awareness especially in the adolescent female population in our society would definitely help in reducing the incidence of this multisystem disorder and its implications.

Authors contribution: MS: Study design, Data analysis and interpretation, **FG:** Data collection, Literature review, **NP:** Critical analysis, **RS:** Literature review, Critical analysis, **SKR:** Literature review, Manuscript writing

Conflict of interest: Nil

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