**Original article:**

# Study of clinical presentation in cases of Polycystic Ovarian Syndrome in rural population

**[1]Dr Shalini Kanotra , [2]Dr Nikita Singh*, [3]Dr V B Bangal**

[1] Associate Professor , OBGY Department , Rural Medical College , Loni , PIMS ( DU) , India

[2]Resident , OBGY Department , Rural Medical College , Loni , PIMS ( DU) , India

[3]Professor and head OBGY, OBGY Department , Rural Medical College , Loni , PIMS ( DU) , India

Corresponding author*

**Abstracts:**

**Introduction:** Polycystic Ovarian Syndrome (PCOS) is a physiological disorder that causes many negativeeffects involving a variety of systems in the body, such as the endocrine, metabolic,psychological, and reproductive systems.

**Material and methods :** This descriptive cross-sectional study was carried out in the Department of Obstetrics and Gynaecology of Pravara rural hospital, Loni. The study was carried out for a period of 2 years from Sept. 2014 to Oct. 2016. All the patients who fulfilled the following criteria were included in study.

**Results**: Patients presenting with oligomenorrhoea were 66 (47.5%) out of 139 than patients without oligomenorrhoea 73 (52.5%).

**Conclusion:** From this study we may conclude that Irregular menstrualtion and Oligomenorrhoea was present as major clinical presenting signs and symptoms in these cases.

## INTRODUCTION

Polycystic Ovarian Syndrome (PCOS) is a physiological disorder that causes many negativeeffects involving a variety of systems in the body, such as the endocrine, metabolic,psychological, and reproductive systems. [1]The three principal features of the syndrome include ovulatory dysfunction, polycystic ovarian morphology, and hyperandrogenism. The prevalence of PCOS is on the rise in developing nations like India, which are undergoing rapid nutritional transition towards anobesogenic diet and lifestyle.[2]

One of the signs that PCOS is “hard wired” is that the endocrine changes that characterize this condition, including insulin resistance and androgen excess, can be detected in adolescence. Moreover it is possible to find out early clinical manifestations of PCOS in late puberty and early adolescence. It has been pointed out that early diagnosis is needed for earlyintervention, includingbehaviourmodification, to minimize theimmediate and chronic consequences of PCOS. [3]The common age of onset for PCOS is adolescence while the common time of diagnosisis during a woman's third or fourth decade of life because the majority of symptoms do notbecome evident until a woman reaches her twenties or thirties, even though some symptoms mayappear starting at menarche. Although PCOS is an endocrine



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disease, it affectsmany systems of the body resulting in reproductive, metabolic, and psychological consequences.With this view preent work was planned to study of clinical presentation in cases of Polycystic Ovarian Syndrome in rural population. 4

**MATERIAL AND METHODS**

This descriptive cross-sectional study was carried out in the Department of Obstetrics and Gynaecology of Pravara rural hospital, Loni. The study was carried out for a period of 2 years from Sept. 2014 to Oct. 2016. All the patients who fulfilled the following criteria were included in study.

**Inclusion criteria:**

- Women of reproductive age group (15-35yrs).
- Women presenting with infertility.
- Women with irregular menstruation, acne, hirsuitism, obesity.

**Exclusion criteria:**

- Young women who had had their menarche less than three years.
- Women with secondary amenorrhoea, hyperglycemia, hyperthyroidism, hypothyroidism etc.
- Women having medical diseases such as heart disease, lung and renal disease etc.

**OBSERVATIONS AND RESULT**

**Table No. 1: Menstrual frequencyof patients with PCOS**

| REGULARITY OF MENSES | NO. OF PATIENTS | % |
|---|---|---|
| **REGULAR** | 33 | 23.7 |
| **IRREGULAR** | 106 | 76.3 |
| **TOTAL** | 139 | 100 |

Out of 139 cases, 106 (76.3%) cases presented with irregular menses, and remaining 33 (23.7%) cases had regular menses.

**Table No.2 :Oligomenorrhea in patients with PCOS**

| HISTORY OF OLIGOMENORRHOEA | NUMBER OF PATIENTS | % |
|---|---|---|
| **PRESENT** | 66 | 47.5 |
| **ABSENT** | 73 | 52.5 |
| **TOTAL** | 139 | 100 |

Patients presenting with oligomenorrhoea were 66 (47.5%) out of 139 than patients without oligomenorrhoea 73 (52.5%).



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**Table No 3: BMI of PCOS patients**

| BMI OF PATIENT | NUMBER OF PATIENTS | % |
|---|---|---|
| **UNDERWEIGHT (<18.5)** | 36 | 25.9 |
| **NORMAL (18.5-24.9)** | 94 | 67.6 |
| **OVERWEIGHT(25-29.9)** | 7 | 5.1 |
| **OBESE (>30)** | 2 | 1.4 |
| **TOTAL** | 139 | 100 |

Maximum patients had normal BMI 94 (67.6%) with 36 (25.9%) patients being underweight

Table No 4 :Evidence of hyperandrogenism in patients with PCOS

| PATIENTS WITH E/O HYPERANDROGENISM | NO. OF PATIENTS | % |
|---|---|---|
| **ACNE** | 4 | 2.9 |
| **HIRSUITISM** | 33 | 23.7 |
| **ALOPECIA(ANDROGENIC)** | 0 | 0 |
| **NO EVIDENCE** | 102 | 73.4 |
| **TOTAL** | 139 | 100 |

Out of 139 patients in the current study, 102 (73.4%) showed no evidence of hyperandrogenism. Hirsuitism was present in 33 (23.7%) patients and 4 (2.9%)patientshad acne.

Table No 5 :Sr. LH levels of PCOS patients

| Sr. LH LEVELS (mIU/mL) | NO. OF PATIENTS | % |
|---|---|---|
| **0.8-15.5 (Normal)** | 123 | 88.5 |
| **>15.5 (Increased)** | 16 | 11.5 |
| **TOTAL** | 139 | 100 |

Out of the 139 patients studied at PRH, maximum patients (88.5%) had normal levels of Sr. LH. These normal levels were of follicular and luteal phase. Remaining 16 (11.5%) had increased levels of Sr. LH.

**Table No 6 :Sr. FSH levels of PCOS patients**

| Sr. FSH LEVELS (mIU/mL) | NO. OF PATIENTS | % |
|---|---|---|
| **1.38-11.6 (Normal)** | 138 | 99.3 |
| **< 11.6(Decreased)** | 1 | 0.7 |
| **TOTAL** | 139 | 100 |



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Out of the 139 patients studied at PRH, majority (99.3%)of the patients had normal levels of Sr. FSH.These normal levels were of follicular and luteal phase.Only 1(0.7%) patient had decreased level of Sr. FSH.

**DISCUSSION**

The prevalence of PCOS varies depending on which criteria are used to make the diagnosis. In this study, a total of 139 patients were studied over a period of 2 years, from Sept. 2014 to Oct. 2016. During this period, the number of gynaec patients attending the PRH OPD was 9325. Thus,the prevalence of PCOS in the current study as per Rotterdam criteria was found to be 1.49 %.

Of the 127 married patients, majority of the patients 113 (89%) had their chief complaints as infertility which was associated with either irregular menstrual frequency or oligomenorrhoea. Only 2 patients with infertility did not have ovulatory dysfunction as a complaint but had other features of PCOS clinically or evidence based. 14 (11%) patients were unmarried and hence no feature of infertility,although they had clinical features of PCOS.

Majority patients 106 (76.3%) in the current study at Pravara Rural Hospital, presented with irregular menses suggestive of ovulatory dysfunction. This finding is consistent with other authors which prove that irregular menstruation is an important clinical feature in patients with PCOS. Oligomenorrhoea,which is another marker of ovulatory dysfunction, was present in 66 (47.5%) cases in the present study. Remining 73 (52.5%) had no such history but were associated with irregular menses.[4,5,6]

BMI is a marker of obesity. Only 2 (1.4%) patients were found to be obese and 7 (5.1%) belonged to overweight criteria. Of the remaining 120 patients, 94 (67.6%) had normal BMI and 36 (25.9%) patients were underweight. Out of 139 patients studied with clinical evidence of PCOS, 37 (26.6 %) showed clinical signs of hyperandrogenism of which 33 (23.7%) had hirsuitism and 4 (2.9%) had acne. No patient with androgenic alopecia was seen.

**CONCLUSION**

From this study we may conclude that Irregular menstrualtion and Oligomenorrhoea was present as major clinical presenting signs and symptoms in these cases.

**References:**

[1] Abbott, D. H., D. K. Barnett, C. M. Bruns, and D. A. Dumesic. Androgen Excess Fetal Programming of Female Reproduction: A Developmental Aetiology for Polycystic Ovary Syndrome? Human Reproduction Update. 2005; 11(4):357-374.

[2] Xita, N., I. Georgiou, L. Lazaros, V. Psofaki, G. Kolios, and A. Tsatsoulis.The Synergistic Effect of Sex Hormone-Binding Globulin and Aromatase Genes on Polycystic Ovary Syndrome Phenotype. European Journal of Endocrinology. 2008; 158(6):861-865.

[3] Rotterdam ESHRE/ASRM-Sponsored PCOS Consensus Workshop Group. Revised 2003 consensus on diagnostic criteria and long-term health risks related to polycystic ovary syndrome. FertilSteril. 2004;81:19–25.

[4] Zadawski, A. D, JR G, FP H, GR M, eds. Diagnostic criteria for polycystic ovarysyndrome: towards a national approach. Boston, USA: Blackwell ScientificPublications 1992.

[5] Azziz, R. Overview of long-term morbidity and economic cost of the polycystic ovary syndrome. In Androgen Excess Disorders in Women.2007 pp. 353-362. Humana Press.

[6] Sheehan, M. T. Polycystic ovarian syndrome: diagnosis and management. Clinical Medicine & Research,2004; 2(1), 13-27.