



A STUDY OF SOCIODEMOGRAPHIC CHARACTERISTICS, ANXIETY & DEPRESSION IN WOMEN WITH POLYCYSTIC OVARIAN SYNDROME

Jyoti Choudhary* 3rd year Resident Doctor Dept. of Psychiatry, Govt. Medical College Kota (Raj). *Corresponding Author

R.S. Rathore Professor Dept. of Psychiatry, Govt. Medical College Kota (Raj).

Vikash Dhaka 2nd year resident doctor Dept. of Psychiatry, Govt. Medical College Kota (Raj).

ABSTRACT **Background:** Polycystic ovarian syndrome (PCOS) is the most common and distressing disorder of reproductive age group female which include symptoms like amenorrhea, hirsutism, obesity, acne, infertility etc. Because of these distressing symptoms PCOS has been associated with significant psychiatric morbidity. **Aims & objectives:** 1.To study the sociodemographic characteristics of females with PCOS. 2.To find out the frequency of different symptoms in females suffering from PCOS. 3.To study the prevalence of anxiety and depression among females suffering from PCOS. **Materials & methods:** 30 consecutive female patients attending gynae OPD from 1/3/2022 to 1/4/2022 suffering from PCOS as per Rotterdam criteria diagnosed by a consultant gynaecologist were taken for the study. They were thoroughly evaluated on a specially designed semistructured proforma, GHQ-12, Hamilton anxiety rating scale, Beck's depression inventory and PCOS questionnaire. **Results were analysed using suitable statistics. Result and conclusion:** Majority (60%) of the patients were from the age group 25-30 years. Most common symptom of PCOS in the patient was menstrual irregularity(90%) followed by obesity(80%), hirsutism(50%), acne(40%), alopecia(20%) and acanthosis nigricans(10%), 33%of the patients showed clinically significant anxiety symptoms, 10% shown clinically significant depression and 10% showed mixed anxiety depression disorders.

KEYWORDS : PCOS, Depression, Anxiety.

INTRODUCTION

Polycystic ovarian syndrome (PCOS) is the most common endocrine disorder in women of reproductive age with a reported prevalence of between 5 and 10% in the developed world¹. In India its prevalence is 3.7 to 22.5%²

Rotterdam ESHRE/ASRM Sponsored PCOS Consensus (Fausser et al. 2004)³. Following these criteria, a woman can be diagnosed with PCOS if she has two of the following three symptoms: (1) Hyperandrogenism (elevated levels of total or unbound hormone blood levels of testosterone), or clinical signs of hirsutism (excessive male patterned hair growth), (2) Intermittent or absent menstruation, and (3) Polycystic ovaries visualized by ultrasound (Fausser et al. 2004). Other symptoms include weight gain or obesity, acne vulgaris, androgenic alopecia, acanthosis nigricans, subfertility or infertility.

Women suffering from PCOS also experience higher rates of depression and anxiety than women in the general population⁴. There are several reports linking specific PCOS features, such as infertility, hirsutism, and acne to decrease mental well-being. Depression and anxiety symptoms are associated with higher body mass index and waist to-hip ratio in women with PCOS. Relationships may be further confounded by the use of psychotropic medications, which may induce weight gain. Therefore, international as well as Indian guidelines suggest that psychological factors must be considered in all women with PCOS and they must be screened for anxiety and depression.

Aims and objectives

- 1.To study the sociodemographic characteristics of females with PCOS.
- 2.To find out the frequency of different symptoms in PCOS patients.
- 3.To study the prevalence of anxiety and depression among females suffering from PCOS.

MATERIALS AND METHODS

This study was approved by the Institutional Ethics Committee. This cross sectional study was carried out for a period of 1 month on 30 consecutive female patients suffering from PCOS attending gynae OPD in NMCH Kota from 1/3/2022 to 1/4/2022. An informed, written consent was obtained from each participant before their recruitment in the study. Adult female patients in the reproductive age group (18-45years) diagnosed by a consultant gynaecologist with PCOS as per "Rotterdam criteria" who are willing to give informed consent were included in study. Patients having any other significant medical and psychiatric illness were not included in the study. This study was done by using Specially designed semistructured proforma, GHQ-12, Hamilton anxiety rating scale, Beck's depression inventory & PCOS questionnaire

RESULTS

Table 1 :Sociodemographic characteristics of female suffering from PCOS

Parameters	subgroup	number(n=30)	percentage(%)
Age (in years)	18-24	00	0.00%
	25-30	18	60.00%
	31-35	06	20.00%
	>35	06	20.00%
Education	Illiterate	00	0.00%
	Up to class 10	04	13.33%
	Up to class 12	06	20.00%
	Graduate	08	26.67%
	Post graduate	12	40.00%
Occupation	Unemployed	03	10.00%
	Homemaker	08	26.67%
	Semi-skilled	00	0.00%
	Skilled	05	16.67%
	Professional	12	40.00%
Marital status	Student	02	6.67%
	Married	18	60.00%
Duration of marital Life(in years)	Unmarried	12	40.00%
	<1	02	6.67%
	2-5	10	33.33%
Children	>5	06	20.00%
	Yes	14	46.67%
Number of children	No	04	13.33%
	1	10	71.42%
	2	03	21.42%
Pregnancy loss	3	01	7.14%
	02		14.28%
Primary infertility	Present	02	11.11%
	Absent	16	88.8%
Secondary infertility	Present	04	28.57%
	Absent	10	71.42%

Table 2 : Distribution of females according to various symptoms of PCOS

Type of symptoms	Number (N=30)	Percentage (%)
Acanthosis	03	10.00%
Alopecia	06	20.00%
Acne	12	40.00%

Hirsutism	15	50.00%
Obesity	24	80.00%
Menstrual abnormality/irregularity	27	90.00%
Infertility	02	6.67%

Table 3 : Distribution of female suffering from PCOS according to Psychiatric morbidity

Psychiatric symptoms	Number (N=30)	Percentage (%)
Anxiety symptoms	10	33.33%
Depression	03	10.00%
Mixed anxiety depression	03	10.00%
Other Psychiatric symptoms	00	00.0%
No Psychiatric symptoms	14	46.67%

Table 4 : Distribution of participants according to severity of anxiety by Hamilton anxiety rating scale

HAM-A score	Number (N=30)	Percentage (%)
No anxiety (0-13)	20	66.67%
Mild anxiety (14-17)	03	10.00%
Moderate anxiety (18-24)	03	10.00%
Severe anxiety (>25)	04	13.33%

Table 5: Distribution of participants according to severity of depression by Beck's depression inventory

Depression score	Number (N=30)	Percentage (%)
Minimal depressive symptoms (0-13)	27	90.00%
Mild depression (14-19)	01	3.33%
Moderate depression (20-28)	02	6.67%
Severe depression (29-63)	00	0.00%

DISCUSSION

Yet, a literature search revealed only four published Indian studies on this subject. Two of those studies had only assessed the prevalence of anxiety and depressive disorders among women with PCOS and had found a prevalence of 28% and 39% for anxiety and 11% and 25% for depression^{5,6}. The study done by Sundararaman et al. in 2008⁷ had determined psychological distress in these patients on the General Health Questionnaire and found it to be significantly related to obesity, infertility, acne, and hirsutism. On the other hand, a 2010 study by Bhattacharya and Jha⁸ assessed the impact of four symptoms, namely, obesity, acne, hirsutism, and acanthosis, only on depression, and found no significant association between the variables. These findings are in stark contrast to each other. No systematic study on anxiety has been conducted in India so far, although there is evidence that anxiety is a significant issue in PCOS.

In our study majority (60%) of the patients were from the age group 25-30 years and most of (40%) were highly educated and professionals. Regarding the symptoms most common symptom of PCOS in the patient was menstrual irregularity (90%) followed by obesity(80%), hirsutism(50%), acne (40%), alopecia (20%) and acanthosis nigricans (10%). Study done by Aditi P. Chaudhari et al(2018)⁹ similar type of frequency of symptoms were present which obtained in our study.

In our study 33% of the patients showed clinically significant anxiety symptoms , out of them 10% suffered from mild anxiety, 10% moderate anxiety and 13.33% suffered from severe anxiety. In depressive symptoms 10% showed clinically significant depression , of them 3.33% suffered from mild depression , 6.67% suffered from moderate depression, no one was suffering from severe depression and 10% showed mixed anxiety depression symptoms. While comparing with other study like Hussain A,Chandel RK et. al(2015)⁵ and Upadhyaya SK et.al (2016)⁶ our study shows same type of results.

CONCLUSION

The current study showed that PCOS is associated with anxiety and depression. Most common symptom of PCOS is menstrual irregularity

than obesity, hirsutism, acne, alopecia and acanthosis nigricans respectively.

ACKNOWLEDGEMENT: The authors acknowledge the participants and government medical college Kota for making the study possible.

Financial support: Nil

Conflict of interest: Nil

REFERENCES

1. Malik-Aslam A, Reaney MD, Speight J. The suitability of polycystic ovary syndrome-specific questionnaires for measuring the impact of PCOS on quality of life in clinical trials. *Value Health* 2010;13:440-6.
2. Malik S, Jain K, Talwar P, Prasad S, Dhorepatil B, Gouri Devi. Management of polycystic ovary syndrome in India. *Fertil Sci Res* 2014;1:23-43.
3. The Rotterdam ESHRE/ASRM-sponsored PCOS consensus workshop group. Consensus Statement: Revised 2003 consensus on diagnostic criteria and long-term health risks related to polycystic ovary syndrome (PCOS). *Hum Reprod* 2004;19:41-47.
4. Månsson M, Holte J, Landin-Willhelmsen K, Dahlgren E, Johansson A, Landén M, et al. Women with polycystic ovary syndrome are often depressed or anxious – A case control study. *Psychoneuroendocrinology* 2008;33:1132-8.
5. Hussain A, Chandel RK, Ganie MA, Dar MA, Rather YH, Wani ZA, et al. Prevalence of psychiatric disorders in patients with a diagnosis of polycystic ovary syndrome in Kashmir. *Indian J Psychol Med* 2015;37:66-70.
6. Upadhyaya SK, Sharma A, Agrawal A. Prevalence of anxiety and depression in polycystic ovarian syndrome. *Int J Med Sci Public Health* 2016;5:681-3.
7. Sundararaman PG, Shweta, Sridhar GR. Psychosocial aspects of women with polycystic ovary syndrome from South India. *J Assoc Physicians India* 2008;56:945-8.
8. Bhattacharya SM, Jha A. Prevalence and risk of depressive disorders in women with polycystic ovary syndrome (PCOS). *Fertil Steril* 2010;94:357-9.
9. Aditi P. Chaudhari, Kaustubh Mazumdar, and Pooja Deepak Mehta. Anxiety, Depression, and Quality of Life in Women with Polycystic Ovarian Syndrome. *Indian J Psychol Med.* 2018 May-Jun; 40(3): 239–246.