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Original Research Article

Polycystic ovarian syndrome (PCOS) awareness among young women of central India

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ABSTRACT

Background: Polycystic ovarian syndrome (PCOS) associated with multiple presentation in females although it is common disorder but due to lack of knowledge females often delays in getting confirm diagnosis and treatment. PCOS remains a syndrome and as such no single diagnostic criterion is sufficient for clinical diagnosis. Objective: To assess the knowledge about PCOS in young women.
Methods: Cross sectional study was performed on 400 women of age group 18-30 years either studying in Colleges or working in Indore city. Written informed consent was obtained and simple random technique was applied for selection of study participants. Pre-designed, pre-tested, semi-structured questionnaire was used for data collection. The data collected were analyzed through percentages and frequencies using Excel. Relevant statistical test was applied was applied and p value was calculated where ever required and considered statistically significant when it is <0.05.
Results: Among 400 participants, only 41% of the women were aware of the term PCOS. 46% of the subjects who were aware about the organ system involved in this disease. Most of the people know about this disorder through friends or relatives. 49% of the women knew about the various signs and symptoms associated with PCOS.
Conclusions: The results of present study show that very few of the young women understand what this disease is and what are the earliest symptoms that should alarm them to consult a physician. Discussion with the girls in college authors came to know that most of the people are considering menstrual pain and irregularities as a part of their physiological process and do not consider consulting a doctor.

Keywords: PCOS, Polycystic ovarian syndrome, Young women

INTRODUCTION

Polycystic ovarian syndrome (PCOS) associated with multiple presentation in females although it is common disorder but due to lack of knowledge females often delays in getting confirm diagnosis and treatment. PCOS remains a syndrome and as such no single diagnostic criterion (such as hyperandrogenism or PCO) is sufficient for clinical diagnosis. PCOS also remains a diagnosis of exclusion. Known disorders that mimic the PCOS phenotype should be excluded.[1]

PCOS shows wide variety of manifestations like hyperandrogenism (hirsutism, acne, alopecia), menstrual disturbance, infertility, obesity, type II diabetes mellitus, dyslipidemia, hypertension, cardiovascular disease, endometrial carcinoma etc. so it is very essential to know the awareness of normal population about PCOS for early diagnosis and treatment of patient.

PCOS appears to be underdiagnosed and, as a result, patients may not be managed appropriately.[2] Furthermore, management of PCOS may require the collaboration of a

variety of healthcare professionals, ranging from primary care physicians, gynaecologists, reproductive specialists, endocrinologists, diabetologists, dermatologists, dieticians and psychologists. In some clinics, important components of the syndrome may not be considered; for example, gynaecological problems in a dermatology clinic or metabolic problems in a gynaecology clinic.[2]

Globally, prevalence estimates of PCOS ranging from 2.2% to 26%.[3-7] Community-based studies using Rotterdam criteria among reproductive age group women have demonstrated varied prevalence figures in few Asian countries ranging from 2% to 7.5% in China to 6.3% in Srilanka.[8-10] Most prevalence studies in India prevalence of PCOS as 9.13% to 36%.[11,12]

METHODS

Cross sectional study was performed on 400 women of age group 18-30 years either studying in Colleges or working in Indore city. Written informed consent was obtained from study participants; simple random technique was applied for selection of study participants. Pre-designed, pre-tested, semi-structured questionnaire was used for data collection before and after knowledge awareness intervention. The data collected were analyzed through percentages and frequencies in which the data were presented in table formats and charts which were obtained using Excel.

It was a cross sectional study. Duration of study was 9 months from July 2016 to April 2017. Sample size was 400 women. Sampling method was simple random sampling method. Study population was women of age group 18-30 years either studying in Colleges or working

Inclusion criteria

- Women of age group 18-30 years, those who gave written consent.

Exclusion criteria

- Women of age group of less than 18 years and more than 30 years, those who did not give written consent.

Ethical consideration: written informed consent to be taken from subjects.

Statistical analysis

Relevant statistical test (Chi-square) was applied and p value was calculated where ever required and considered statistically significant when it is <0.05.

RESULTS

This result is significant, and awareness increased by 58.53%. Only 164 (41%) out of 400 women were aware of the term PCOS after educational intervention 260 out of 400 women were aware of the term PCOS.

Table 1: Awareness about the term PCOS.

	Aware of the term PCOS	Not aware	Row totals
Pre-test	164	236	400
Post test	260	140	400
Column totals	424	376	800 (Grand total)

(Chi-square=23.1232 p-value=0.000002)

The result is significant and awareness regarding organ system involved in PCOS increased by 36.95%. 184 (46%) women out of 400 were aware of organ system involved in PCOS after educational intervention 252 out of 400 women were aware for same.

Table 2: Awareness regarding the organ system involved in PCOS.

	Aware of the organ system involved	Not aware	Row totals
Pre-test	184	216	400
Post test	252	148	400
Column totals	436	364	800 (Grand total)

(Chi-square=11.654 p-value=0.000641)

This result is significant and Awareness regarding cause of PCOS increased by 15.70%. Table 3 shows that 60% of participants were aware of the cause of PCOS.

Table 3: Awareness regarding cause of PCOS.

	Aware of the cause	Not aware	Row totals
Pre-test	242	158	400
Post test	280	120	400
Column totals	522	278	800 (Grand total)

(Chi-square=3.9803. p-value=.046036)

The result is significant and Awareness regarding symptoms increased by 47.95%. 196 (49%) women out of 400 were aware of symptoms in PCOS after educational intervention 290 out of 400 women were aware for same.

Table 4: Awareness regarding the symptoms of PCOS.

	Aware of symptoms	Not aware	Row totals
Pre-test	196	204	400
Post test	290	110	400
Column totals	486	314	800 (Grand total)

(Chi-square=23.1606 p-value= .0000010)

This result is significant, and awareness increased by 50.68%. 146 women had awareness regarding association of PCOS with cancer and infertility. After educational intervention 220 women had awareness for same.

Table 5: Awareness regarding association of PCOS with cancer and infertility.

	Aware of relation between PCOS and cancer	Not aware	Row totals
Pre-test	146	254	400
Post test	220	180	400
Column totals	366	434	800 (Grand total)

(Chi-square=13.7896. p-value=.000204)

This result is significant, and awareness increased by 34.25%.

Table 6: Awareness regarding the lifestyle changes that have led to increased cases of PCOS nowadays.

	Aware of cause for increase in no. of cases	Not aware	Row totals
Pre-test	216	184	400
Post test	290	110	400
Column totals	506	294	800 (Grand total)

(chi-square=14.724 p-value=.000124)

Figure 1 shows 57% of the women under study are experiencing irregular menstrual cycles 33% have regular menstrual cycles 9.5 % answer don't know.

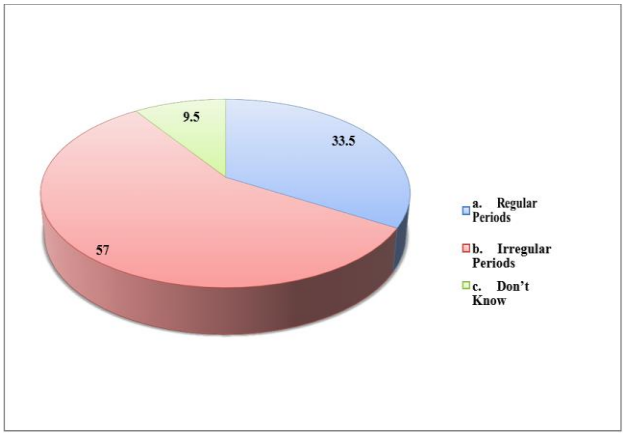

Figure 1: Pattern of menstrual cycle.

Figure 2 shows that 24.5% of the women under study are experiencing pain or abdominal discomfort during menstruation, 65% sometimes experiencing pain or abdominal discomfort during menstruation.

Other findings: Problem of excess hair growth present in around 13 % of participants. 74 % have acne problem.

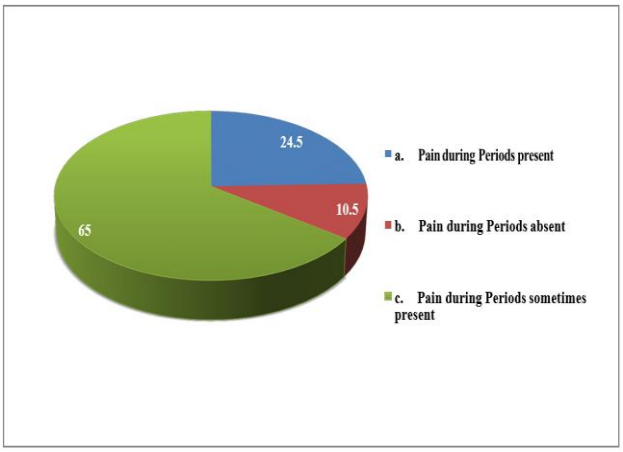

Figure 2: Abdominal discomfort during menstruation.

DISCUSSION

Authors conducted a study on awareness regarding polycystic ovarian disease among students of college and working women of age group 18-30 years using a semi structured questionnaire followed by an educational intervention to increase their knowledge regarding the disorder which gave the following findings:

In present study only 41% (Table 1) of the women were aware of the term PCOS, 46% of the subjects who were aware knew about the organ system involved in this disease. Similar study by Safa showed that 50% have knowledge about the PCOS and in contrast to present study only 6 % aware about the reasons and consequences of the condition.[13] Another survey by Ansari et al found only 10% has knowledge of PCOS. Study by Sabitha et al revealed that 76 % had average knowledge about PCOS and 10% had good knowledge.[14] Study by Hansa et al shows that 78% are unaware of this condition which is not in line with present study.[15] Abbas et al found in there study 45 % are aware of PCOS condition which is similar to present finding.[16] Sunanda B et al found that 76% of the samples were with average knowledge and 10.7% with good knowledge regarding polycystic ovarian syndrome.[17] Sills ES et al found that more than 97% (n =638) of the respondents were familiar with PCOS, while 1.9% had not been told about PCOS, and <1% were uncertain.[18] Gul S et al found that only 20 out of 177 women had any knowledge about this syndrome.[19] Out of these 20 women 11 were those who had degrees in Medical Sciences.[6]

Present study revealed that most of the people know about this disorder through friends or relatives.49% of the women knew about the various signs and symptoms associated with PCOS. 46% of the people did not know about the role of lifestyle changes like diet, lack of physical activities, stress and obesity are that are involved in the pathogenesis of the disorder. Similar study by Pitchai et al showed 81% participants think that PCOS is manageable which is higher than present study and 30%

women knew sign symptoms of PCOS which is little less than present finding.[20] A study performed on polycystic ovarian syndrome in adolescents in Rotterdam showed that 11.5% of the population got knowledge from a doctor and 5% learnt from the internet Jayshree et al[21], another study shows information source 51% from doctor and 22% form internet Pitchai et al.[20]

In present study very few of them were aware (only 36.5%) of the fact that PCOS has a direct correlation with various cancers like ovarian cancer and many of the heart diseases. Majority of them (63.5%) did not know that PCOS is one of the major causes of infertility among females. (Table 5) Only 61.5% of the subjects are regularly involved in some kind of exercise. Almost 42% of the subjects were struggling with difficulty in losing weight. Study by Pitchai et al shows that 62 % women are aware of exercise benefit in PCOS and in study by Safa revealed that 74 % participants knows the benefit of exercise these findings are very close to present observations.[13,20]

Majority of women i.e. 75.5% are facing or had faced the problem of acne over their face and almost 13% are struggling with excess hair growth over face or abdomen. As high as 89% of the women experience pain or abdominal discomfort either regularly or sometimes during menstruation. Only 33.5% women undergo regular menstrual cycle with proper bleeding in each cycle. Study by Upadhye JJ et al revealed that 33 % had acne, 16% had menstrual irregularities 5% had hirsutism.[21] Similarly another study by Sanchez N et al found that 32% were obese, 21% had acne, and 7% were hirsute these findings are quite less than present findings.[22]

CONCLUSION

The results of present study show that very few of the young women understand what this disease is and what are the earliest symptoms that should alarm them to consult a physician. Discussion with the girls in college authors came to know that most of the people are considering menstrual pain and irregularities as a part of their physiological process and do not consider consulting a doctor.

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