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PCOS: Symptoms and Awareness in Urban Pakistani Women

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ABSTRACT

The Poly Cystic Ovaries Syndrome is considered to be most prevalent of all endocrine disorders which women face. It is the leading cause of Infertility in women of child bearing age. The purpose of our study was to collect data on how many women had symptoms of this syndrome including hirsutism, amenorrhoea, dysmenorrhoea and oligomenorrhoea. Furthermore what was the ratio of women who were aware of this disorder was evaluated. Data was collected from one hundred and seventy seven women who were either seeking or imparting education in a university. A small portion of our subjects were educated house wives. Subjects were inquired through survey forms of above mentioned symptoms. The collected data was then interpreted to find the prevalence of above mentioned symptoms and awareness about PCOS. 36.7%out of 177 subjects had hirsutism. (Facial hair: 19.5%, Breast hair: 6.5%, other forms of hirsutism: 6.5%). Regarding menstruation 14% had some sort of irregularity. 9% women had oligomenorrhoea, 3% women had amenorrhea. On the whole 10% were familiar with PCOS. To conclude this study does not have sufficient evidence to establish the prevalence of PCOs through ultrasonography; thus only prevalence of amenorrhoea, oligomenorrhoea and hirsutism has been stated which can serve as a guideline towards finding the true prevalence PCOS in our society

Key words: Ovaries Syndrome, hirsutism, oligomenorrhoea.

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1. INTRODUCTION

PCOS or polycystic ovary syndrome is said to be the most common female endocrine disorder. It is characterized by chronic an ovulation, hyperandrogenism, infertility.[1] Women with this Syndrome have been observed to be hyperinsulinemic.[1] Currently Rotterdam Criteria is preferred for

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diagnosing PCOs which says that for establishing the diagnosis of PCOS any two of the following features should be present; anovulation/ oligoovulation, hyperandrogenemia and appearance of Polycystic ovaries on ultrasound.[2] Among different heterogeneous diseases with uncertain etiology PCOS is the one which affect between 5 and 10% of women of the child bearing age.[3] PCOS can be considered as a multi organ syndrome as it can effect adrenal and sex hormones along with pituitary hormones including adrenocorticotropic hormone (ACTH), gonadotropins and growth hormone.[4] Patients with PCOS are at risk of type 2 diabetes mellitus as they suffer from insulin resistance alongside symptoms of abdominal obesity plus increased secretion of interleukins, chemokines and adipokines (due to body's inflammatory state).[4] The hallmark of this disease can be characterized into following three divisions; clinical, endocrine and metabolic. The clinical traits are abnormal menstrual cycle, acne, hirsutism, alopecia, anovulation, infertility and miscarriages. The endocrine traits are increased levels of androgens, luteinizing hormone and prolactin. The metabolic angle of this disorder is insulin resistance, obesity, lipid abnormalities and an increased risk of impaired glucose tolerance which can lead to type 2 diabetes mellitus.[5] It has been established that about 50% of the patients are obese women and obesity does contribute to the pathology.[6] Furthermore it has been indicated that PCOS may lead to depression and anxiety.[7]

In a study conducted in Iran they used ultrasonographic methods, clinical histories and hormone profiles of women and concluded that 7.1%, 11.7% and 14.6% women had Polycystic Ovaries Syndrome according to INH definition, AES criteria and Rotterdam consensus definition respectively.[8] One Study conducted in Srilanka showed total prevalence was 6.3%.[9] A study was conducted on Indian adolescents and 9.13%

subjects were diagnosed with PCOS according to Rotterdam criteria.[10] Another study was conducted in United States. Subjects were diagnosed to have PCOs on the bases of hyperandrogenemia and oligoovulation (related disorders were excluded). It was concluded that 8% of black and 4.8% of white women had PCOs.[11] A similar study was conducted on Southeastern population of United States at the time of which data derived from pre employment physical examination at a university was used and it concluded that 3.4% of blacks and 4.7% of white women had PCOs.[12] Another data collected in Spain indicated 6.5% women in population were affected.[13]

The aim of the study and collecting data is to determine and interpreted the prevalence of above mentioned symptoms and awareness about PCOS, what percentage of urban Pakistani women is hirsute? What percentage of urban Pakistani women is suffering from oligomenorrhea, amenorrhoea? And what percentage of urban Pakistani women is aware of the syndrome?

2. METHODOLOGY

This study was conducted in Karachi which is the metropolitan city of Pakistan, a country situated in South East Asia. 177 females whose ages were between 20 -50 years participated in the study. 153 of these women were students pursuing College Degrees. 20 of these women were working women. Four out of our 177 subjects were home makers. The survey was conducted through a questionnaire which inquired subjects about, 1) regularity of their menstrual cycle and menstruation symptoms; 2) occurrence, nature and severity of hirsutism; 3) level of awareness regarding this disorder. Women who stated that their menstrual cycle was not regular were placed in the category of "Women with irregular menstrual cycle". Subjects who suffered from absence of menstruation for more than thirty five days were characterized to have

oligomenorrhoea. Absence of menstruation for more than three months was considered to be amenorrhoea in this case. Question used for level of awareness was whether they had ever heard of Poly Cystic Ovaries Syndrome before. The questionnaire also contained questions about their weight, age, exercise routine, diet, and family history of metabolic disorder and if they have ever had difficulty achieving pregnancy. Then the data was sorted and compiled and results were obtained by grouping data.

3. RESULTS

Our Sample size was 177 urban women of Pakistan. Out of these one hundred and seventy seven women 3% had amenorrhea and 9% had oligomenorrhea. In the survey we conducted on PCOS prevalence following were our findings. Hirsutism was quite prevalent in our target population. 37% women suffered from some kind of hirsutism. Facial hair was the most prevalent and was found in 19.5% women. Breast hair followed, 6.5% suffered from it. Rests of women were those who had excessive hair growth in other parts of body. This survey was conducted in educated women who were either seeking college degrees or who had earned them, but still level of awareness was very low. Only 20 out of 177 women had any knowledge about this syndrome. Out of these 20 women 11 were those who had degrees in Medical Sciences. In our target population only 3.33% percent women exercised regularly and had higher levels of physical activity.

4. DISCUSSION

Total number of people who participated in this study was 177. Out of these 177 urban and educated women only 20 could say that they had heard of this disorder before or were well aware of it. And in these 20 women 11 were those who had or were pursuing degrees in field of Health. The numbers conclude that 10% of women in our study knew about this disorder

but if we exclude females who had degrees in health we can say that much fewer women had any kind of knowledge regarding this syndrome despite its high prevalence.
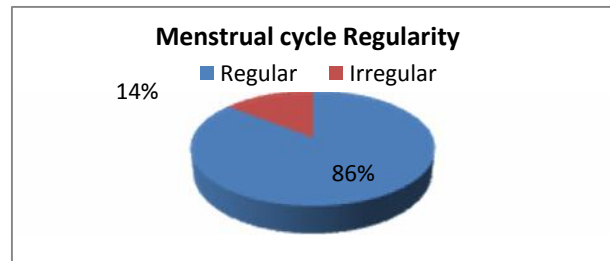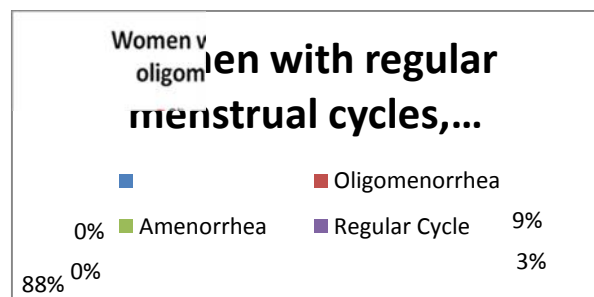

Fig 1: Percentage of women with menstrual irregularity.

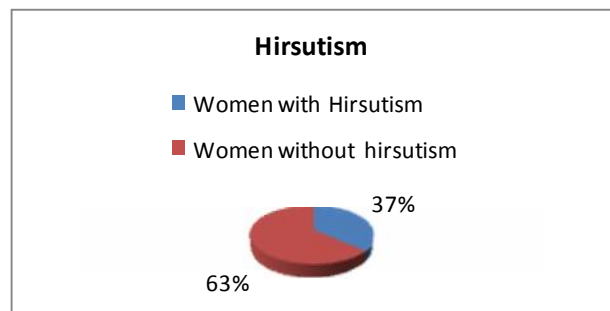**Fig 2: No of women with regular menstrual cycles, oligomenorrhea and amenorrhea**
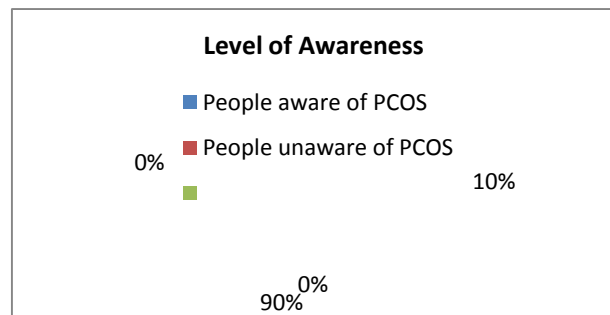

Fig 3: Percentage of Women with Hirsutism
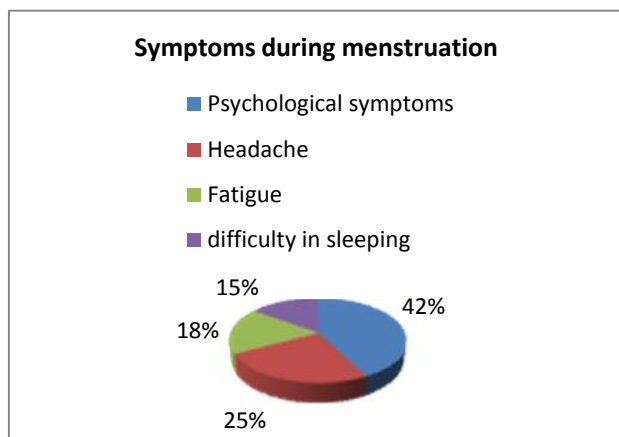

Fig 4: Level of awareness

Fig 5: Symptoms during menstruation

Regarding menstrual cycle only 77 women provided comprehensive information. Out of these 77, 68 (88.3%) women had satisfactorily regular cycles. In answer to the question whether there is absence of menstruation for more than 35 days, 7 (9%) out of 77 women responded positively thus were put into the category of subjects suffering from oligomenorrhoea. 3 (3.9%) out of 77 women had had amenorrhea. A rough data on premenstrual symptoms was also collected which suggested that majority of the women in our study suffered from psychological symptoms including irritability, mood swings, dysphoria, stress, anxiety, tension and etc. 31 reported to suffer from psychological premenstrual/ menstrual symptoms. 18 subjects reported to have headache. 13 women said that they feel fatigued during menstruation while 11 admitted that they have difficulty in sleeping during menstruation.

On the whole 65 (36.72%) out of total 177 women reported that they suffered from some kind of Hirsutism. 77 women answered questions regarding where it was more evident in their body. Out of these 77, 25 women had some form of hirsutism. Distribution of body hair was as follows. 15 (19.5%) females out of 77 said that that they had facial hair. 5 (6.5%) out of 77 women suffered from growth of hair around nipples. Thick hair on other body sites were also reported including on upper thighs and abdominal hair. 14 out of 77 had hair on upper thighs while 5 said that they had abdominal hair.

5. CONCLUSION

Ultrasonographies were not employed to diagnose cysts present ovaries nor were other clinical parameters used to establish clinical hyperandrogenism thus we can not exactly calculate PCOS prevalence in Pakistani urban society. But an attempt has been made to find levels of menstrual irregularities, oligomenorrhoea, amenorrhea and hirsutism which can be predictive of oligoovulation, anovulation and hyperandrogenism respectively.

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