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AOVERVIEW AND MANAGEMENT OF POLYCYSTIC OVARIAN SYNDROME WITH TREATMENT MODULATION

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ABSTRACT

Many women with poly cystic ovarian syndrome are obese. Our study investigated that overweight people deals with endocrinopathy are women with in the reproductive age affecting about 6-8 % of age group. This disorder in morbidity women with PCOS –a major risk factor for the development of heart diseases, strokes and type II diabetes. **Materials and methods:** The study is a prospective observational study with retro-selective data collection among 72 people of gynecology department in a government hospital Tenali. **Study setting:** The study was conducted in the gynecology department in a government hospital Tenali AP India. **Study duration:** The duration of the study was from [April-September] 6 months. **Study design:** The current study was design as a cross section and uni centric study. **Exclusion criteria:** Long term treatment and age above 34 and BMI above 34, lactating, pregnancy, older-age, children and breast cancer patients are excluded from the study. **Results:** Out of 72 women's managed with PCOS with a period of 6 month study with age of 22-34- and BMI of above 30. Who had underground weight loss surgery between Jan-April of these 61 patients were included for analysis.majority of female were students n=54 followed by public servants n=18. All the women n=72 [100%] ultrasonography of abdomen suggestive of PCOS, menstrual disturbance. The women had fertility desired ovulated on clomiphene citrate, metformin and also NORMOZ (chromium, picolinate, d-chiroinositol, myoinositol, vit-D3) and the pregnancy rate was increased with respectively. **Discussion:** PCOS is a complex endocrine disorder associated with an aggravated by obesity, weight loss, has been demonstrated to decrease insulin and androgen levels as well as to improve the clinical manifestations of PCOS. The raised levels of androgens, estrogens, insulin and LH explain the classic PCOS presentation on hirsutism, an ovulation or dysfunctional bleeding and also glucose metabolism dysfunction. **Conclusions:** Our study concluded that patients with PCOS who undergone Clomiphene citrate induction and Normoz (chromium, picolinate, D- chiroinositol, myo –inositol vit-D3), are of great benefit. Therefore need for further studies PCOS in development countries so as to bring the various treatment modalities on improvement of ovulation rates, menstrual cycles and pregnancy rates. Under the guidance of clinical pharmacist resistance and regularity on medication will increase the chance of getting pregnancy.

KEYWORDS: Poly Cystic Ovarian Syndrome, reproductive age, menstrual cycle, infertility, clomiphene citrate, Normoz, Body Mass Index (BMI).

INTRODUCTION

The polycystic ovarian syndrome (PCOS) is one of the most endocrinopathy and a common cause of infertility is due to an ovulation affects,[1,5] within the reproductive age. The PCOS is a heterogeneous condition which is defined by the presence of two out of the following criteria 1) oligo-and/an ovulation 2) hyperandrogonism (clinical and bio chemical) and polycystic ovarian[5,6] with exclusion of other aetiologies.[2] According to the national institute of health, basic diagnostic criteria should be presence of hyper androgens is such a (adult onset congenital adrenal hyperplasia), hyper prolactenemia, and androgen secreting neoplasm's.[3] The major clinical features are menstrual cycle disturbance hyperandrogenism and poly cystic ovarian .this triad symptoms are commonly accompanied by obesity and infertility. PCOS is responsible about 75% of anovulatory. Infertility.[6] Women with PCOS are therefore at increased risk for DM as well as endometrial carcinoma and CVD.[7,8]

The pathophysiology of PCOS may have a genetic component although it can be suggested that the main factors responsible for the increasing prevalence of PCOS and related to the influence of the environment, include, dietary habits, behavioral and other still undefined factors.[1]

The clinical features of PCOS are heterogeneous and may change throughout the life span starting from adolescence to postmenopausal age 37. This is largely dependent on the influence of obesity and metabolic normal menstruation, ovulatory cycle and fertility, prevent endometrial hyperplasia/ carcinoma, and to improve hirsutism and acne.[7,13] The management of women with PCOS anovulatory infertility consists of preliminary investigation, treatment to induce ovulation and monitoring of ovulation induction.[8,9]

Obesity has an important impact on the severity of these manifestations in the proportion to its degree and particularity in the presence of the abdominal phenotype.[17] Efforts other include weight loss and exercise, the use of ovulation – inductor agent such as (clomiphene citrate, NORMOZ (chromium, picolinate, D- chiroinositol, myo –inositol vit-D3), recently the use of insulin stimulating agent. this study was however undertaken to review in details the pattern of the chemical and biochemical presentation of PCOS in our territory health care hospital, the various treatment modalities offered as well as this out comes.[1,2]

MATERIALS AND METHODS

The study is a prospective observational study with retro selective data collection among 72 people of gynecology department in a government hospital Tenali.

Study setting: The study was conducted in the gynecology department in a government hospital Tenali AP India.

Study duration: The duration of the study was from [April- Sep] 6 months.

Study design: The current study was design as a cross section and uni centric study.

Exclusion criteria: Long term treatment and age above 34 and BMI above 34 years are, excluded from the study.

Data sheet for the study include age, material, menstrual history, BMI, educational level, material status, length of infertilities, regularities/irregularity of cycles length, medical history, family history, history of DM, HTN, acne, hirsutism, thyroid states and lab investigation like serum FSH, LH and blood sugar 2 hours after 75g glucose load, serum prolactin, thyroid hormone levels. Ultrasonography abdomen including both ovarian and fallopian tubes was ah noted. Collected data was analyzed with computer based software.

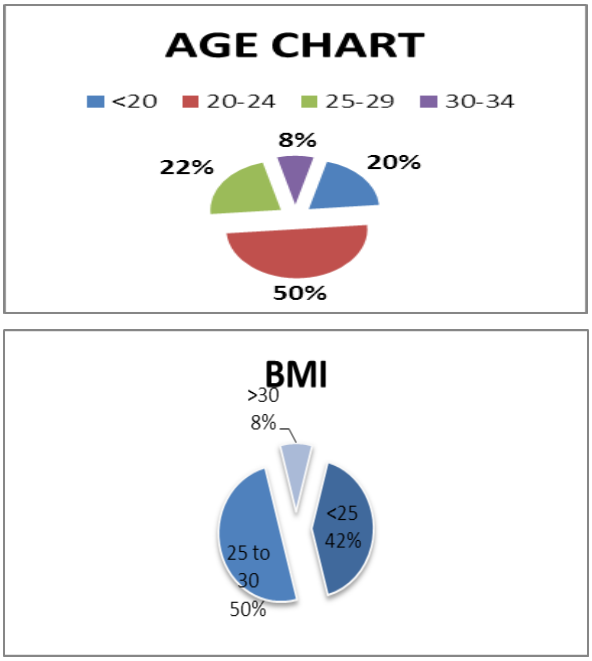
RESULT

From the study we carried out 72 sub fertile of women suffering from PCOS were recruited for evaluation. Age ranges from 16 to 30 years (72). And menstrual cycle was regular in 23(31.94) and irregular 49(68.05), marital status in which married were 52(72.22) and unmarried were 20(27.78) oligomenorrhoea was present in 24(33.33) and absent in 48(66.66), BMI with normal <25 is of 30(41.66), above 30 is in 36(50) and ≥ 30 is of 6 is (8.3) acne was present in 61(84.72) and absent in11 (15.27), hirsutism was present in 18(25) and absent in 54(75), dysmenorrhea was present in 18(25) and absent in 54(75), Oligomenorrhoea was present in 24(33.33) and absent in 48(66.66), Nulliparous was present in 45(62.5) and primiparous in 27(37.5), abortion was present in 9(12.5) and absent in 63(87.5), cervix found healthy in 63(87.5)and unhealthy in 9(12.5), fibroid in uterus present in 7(97.2) and absent in 65(90.72).

Laboratory findings also analyzed for each women who is suffering with PCOS, the findings were serum luteinizing hormone normal in 22(30.55) and raised 50(69.44), serum follicle stimulating hormone was normal in 9(12.5) and raised were 63(87.50), serum prolactin was normal in 54(75) and raised were 25(25.00), blood sugar after 2 hours load was normal(7.8mmol/L) in 45(62.5) and raised 27 (37.5)and thyroid stimulating hormone levels was (2.35 ±0.82IV/ml and normal was found in 63(87.50) and raised were 9(12.50). All the patients were undergone ultrasonography of lower abdomen and finalized/ conformed to PCOS.

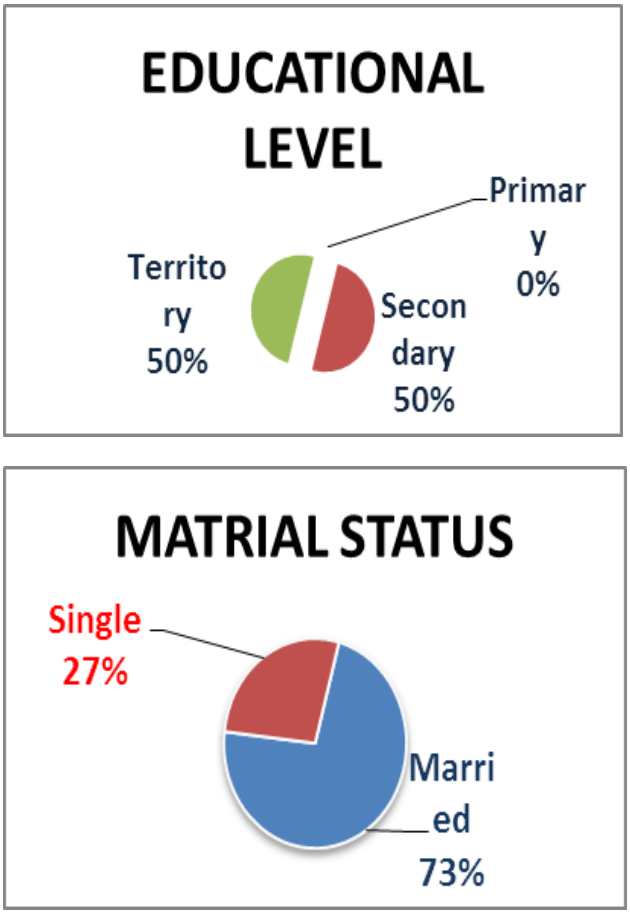
Table: social demographic status of the women with PCOS. [n=72]

Age	**Frequency**	**Percentage**
<20	14	19.44
20-24	36	50
25-29	16	22.2
30-34	6	8.3
BMI		
<25	30	41.66
25 to 30	36	50
>30	6	8.3
Educational Level		
Primary	0	0
Secondary	36	50
Territory	36	50

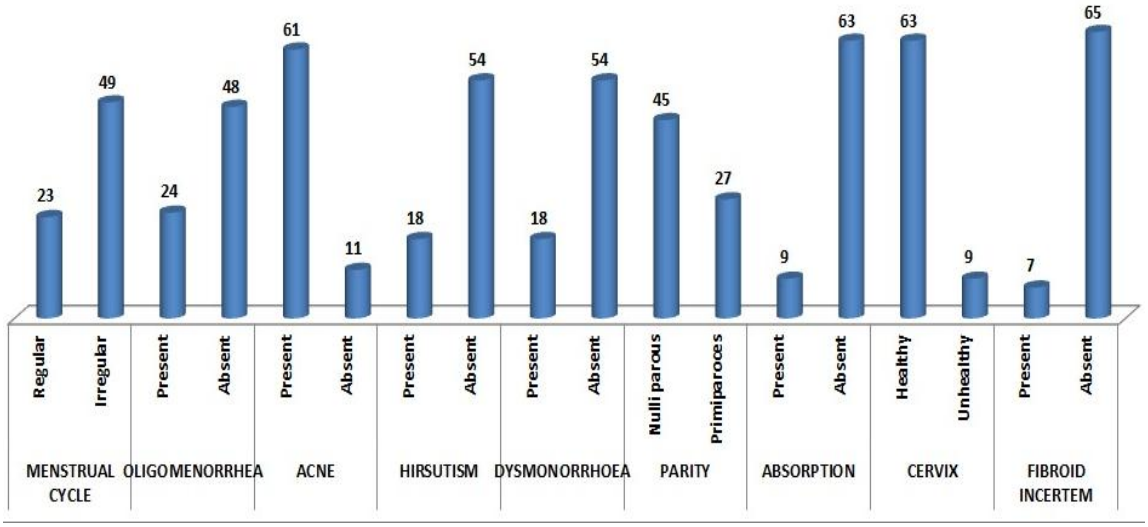


Picture 1: Represents the age and BMI of the patients.

Material Status		
Married	52	.72.2
Single	20	27.2
Menstrual Cycle		
Frequency	Percentage	
Regular	23	31.50
Irregular	49	68.50
Oligomoorrhoea		
Present	24	33.33
Absent	48	66.66
Acne		
Present	61	84.73
Absent	11	15.27
Hirsutism		
Present	18	25.00
Absent	54	75.00
Dysmonorrhoea		
Present	18	25.00
Absent	54	75.00
Parity		
Nulli parous	45	63.50
Primiparoces	27	37.50
Abortion		
Present	9	12.50
Absent	63	87.50
Cervix		
Healthy	63	87.50
Unhealthy	9	12.50
Fibroid Incertem		
Present	7	09.72
Absent	65	91.28



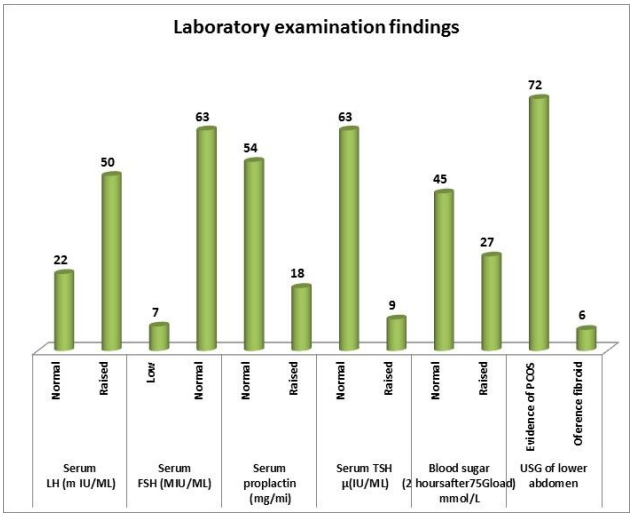
Picture 2: Represents the educational level and marital status of the patients.



Picture 3: Represents the regularities and conditions of the patients.

Laboratory examination findings

Serum LH (m IU/ML)		
Normal	(1.1-14.7)	22
Raised	(>14.7)	50
Serum FSH (MIU/ML)		
Low	(<2.8)	7
Normal	2.8-21.0	63
Serum proplactin (mg/mi)		
Normal	1.9-25.0	54
Raised	>25.0	18
Serum TSH µ(IU/ML)		
Normal	0.4-4.0	63
Raised	>4.0	9
Blood sugar(2 hoursafter75Gload)mmol/L		
Normal	<7.8	45
Raised	-7.8	27
USG of lower abdomen		
Evidence of PCOS	72	
Oference fibroid	6	



Picture 4: Represents the laboratory findings of the patients.

DISCUSSION

PCOS is a complex endocrine disorder that is associated with an aggravated by obesity, weight loss has been demonstrated to decrease insulin and androgen levels as well as to improve the clinical manifestation of PCOS.[10,18]

In our study we observed that there is heterogeneity in the presentation of pt with PCOS. The pathogenesis of PCOS is poorly understood by the primary defect may be insulin resistance, leading insulinemia in the ovary.[11] The cardinal feature in functional hyper androgen sin, circulatory concentration of insulin's (LH) and generally ranked.[12] The theca cells which envelop the follicle and produce androgens for conversation in the ovary to oestrogen are over respomive to this stimulation. This combination of raised level of androgen, oestrogen, insulin and LH explain the classic PCOS presentation was hirsutism, an ovulation or dis functional bleeding and dysfunction of glucose metabolism.[14,15]

The rise in LH levels is thought to be caused by the relatively high and unchanging concentration of estrogens that may alter the control of this hormone by the hypothalamic pituitary access menstrual dysfunction including irregular periods can be managed by administration of progestin's (medroxy progesterone acetate or nor ethisterone)[16] or the oral contraceptive pill. Endo material hyperplasia should be a assessed by us examination, endometrial biopsy or hysteroscopy and can be treated by hormonal theory such as oral contraceptive pill or progestin's.[7,17]

The cause of infertility in patient with PCOS in generally lack of ovulation because of failure of the follicles to develop beyond 10 mm. Most cycles are an ovulatory and induction of ovulation is essential clerks and colleagues demonstrated even a 5% reduction in body mass restores ovulation and fertility.[19-20]

Several studies have shown that weight loss can lead to resumption of ovulation within weeks. Life styles changes are the first line in intervention in women with PCOS who are overweight.[16] Glucose intolerance can be managed by diet and exercise weight control and oral drugs (NORMOZ or anti diabetic drugs).

CONCLUSIONS

Our study concluded that patients with PCOS who undergone Clomiphene citrate induction and Normaz (chromium, picolinate, D- chiroinositol, myo –inositol vit-D3), are of great benefit. Therefore need for further studies PCOS in development countries so as to bring the various treatment modalities on improvement of ovulation rates, menstrual cycles and pregnancy rates. Under the guidance of clinical pharmacist resistance and regularity on medication will increase the chance of getting pregnancy.

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