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Original Article

Management of Polycystic Ovarian Disease in Karur: A Prospective Study

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Abstract

Introduction: Polycystic ovary disease (PCOD) a condition in which a woman has an imbalance of female sex hormones. This may lead to menstrual cycle changes, cysts in the ovaries, trouble in getting pregnant and other health changes. The main causes are genetic and hormonal imbalance.

Aim: To study the clinical presentation of PCOD, the general management and the relation with hormonal changes, effects on pregnancy, and its complications.

Materials and Methods: Prospective observational study, 20 patients with irregular menses were included in the study. Hormonal assays, blood, and urine investigations and USG studies were performed. General, physical, clinical, systemic, gynecological examinations and special investigations such as endometrial biopsy and radiology were also done.

Results: A majority of the patients fall under the age group 21-25 (35%) from their teenage itself. 30% of patients came under 31-35 and 70% represent 26-30 years. In 20 patients, 60% represented fertility and 40% represented infertility. Among 20 patients, 25% showed mild improvement, 55% showed moderate improvement after treatment.

Conclusion: Hormonal dysfunctions in PCOD manifested together or independently. PCOD women can be sub-grouped based on clinical features suggestive of endocrinological malfunctions and can be investigated accordingly for selection of appropriate treatment modalities.

Key words: Adolescents, Clinical features, Polycystic ovary disease, Women health

INTRODUCTION

The polycystic ovarian disease is the most common endocrine disorder in women worldwide. The syndrome is characterized by ovulatory dysfunction, hyperandrogenism, and polycystic ovaries (PCO). These features can lead to multiple symptoms with systemic as well as organ-specific aberrations. As PCO disease (PCOD) is associated with several other diseases/morbidity-related factors such as obesity and other cardiovascular disease risk factors which are becoming more prevalent among females today, further research on the pathophysiology and the long-term effects of PCOD is of the utmost importance to prevent future health problems in the large group of PCOD women.[1]

PCOD is a heterogeneous disorder of uncertain cause. There is some evidence that it is a genetic disease. Such evidence includes the familial clustering of cases, greater concordance in monozygotic compared with dizygotic twins and heritability of endocrine and metabolic features of PCOD.[2,3]

The severity of PCOD symptoms appears to be largely determined by factors such as obesity.[4] PCOD has some aspects of a metabolic disorder, since its symptoms are partly reversible. Even though considered as a gynecological problem, PCOD consists of 28 clinical symptoms.

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The clinical presentation of PCOD varies widely. Women with PCOD often seek care for menstrual disturbances, clinical manifestations of hyperandrogenism, and infertility. Menstrual disturbances commonly observed in PCOD include oligomenorrhea, amenorrhea, and prolonged erratic menstrual bleeding.[5]

The choice of treatment for women with PCOD depends on the symptoms with which a patient presents. Symptoms typically fit into three categories: Menstruation related disorders, androgen-related symptoms, and infertility.[6]

Aim

To study the clinical presentation of polycystic ovarian disease, the general management and the relation with hormonal changes, effects on pregnancy and its complications.

MATERIALS AND METHODS

This is a prospective observational study conducted in Poongothai Hospital in karur town. Hospital approval and informed consent from the patients were obtained. 20 patients were included in the study. Age group between 15 and 35 years, obese patients with metabolic syndrome, patients with the history of menstrual irregularities, women with the history of infertility, women with the findings of acne, and hirsutism and alopecia, patients with the positive genetic history and hormonal imbalance were included in the study. Age group above 35 years, obese patients with fertile and regular menstrual history, patients with ovarian cysts but no history of menstrual irregularities and infertility, infertile women with no history of obesity and with the history of regular menses, obese women with fertile and hormonal balance and with no history of acne, hirsutism, and alopecia, patients with no genetic history were excluded from the study.

RESULTS

Figure 1 shows the frequency distribution among the age groups. There were 20 patients in this study and 30% come under the age group 15-20 years, 35% came under the age group 21-25 years, 30% come under the age group 26-30 years, and 5% came under the age group 31-35 years.

Figure 2 shows the frequency distribution of occupation among the patients. There were 20 patients in this study and 35% come under private job, 10% come under government job, 10% under self-employee, 30% are students, and 15% are housewives of the total respondents.

Figure 3 shows the distribution of socioeconomic status among 20% patients out of 20 patients 5% belong to poor economic status and 95% belong to middle income group.

Figure 4 shows the frequency distribution of the age at menarche. There were 20 patients in this study. Among these, those who attained the menarche at the age of 12 years represent 15%, at the age of 13 years represent

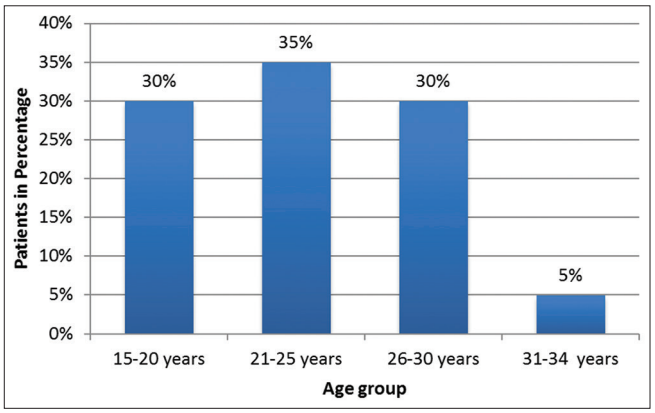

Figure 1: Distribution of patients in age groups

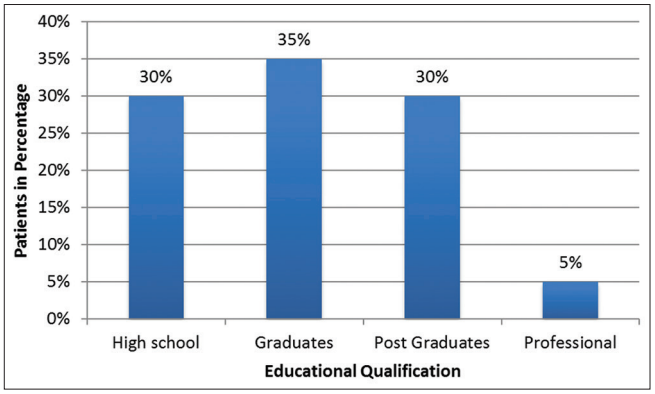

Figure 2: Distribution of patients in educational qualifications

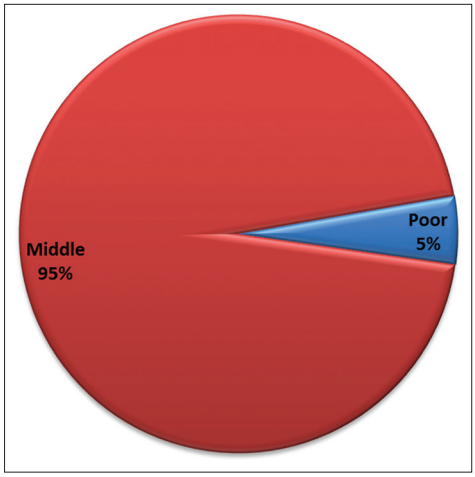

Figure 3: Distribution of patients in socioeconomic status

45%, at the age of 14 years represent 30%, and at the age of 15 years represent 10%.

Figure 5 shows the distribution of body mass index (BMI) of 20 patients. 30% of patients came under 31-35 and 70% represent 26-30.

Figure 6 shows the frequency distribution of the result of the treatment among 20 patients. Among 20 patients, 25% showed mild improvement, 55% showed moderate improvement and 20% shows marked improvement.

Figure 7 shows the distribution of infertility among the patients. Out of these 60% represented fertility and 40% represented infertility.

Figure 8 shows the frequency of fertility at the end of the treatment among 4 patients. Out of these 50% become fertile and 50% become infertile.

DISCUSSION

The prevalence of PCOS depends on the choice of diagnostic criteria. The World Health Organization estimates that it affects 116 million women worldwide as of 2010 (3.4% of women).[7]

In our study, 30% of cases were reported in 15-20 years which is second higher, first is 21-25 years. Bronstein *et al.* studied the incidence were 26% (15/58) preadolescent girls (9-12 years) versus 74% (43/58) adolescents (13-18 years).

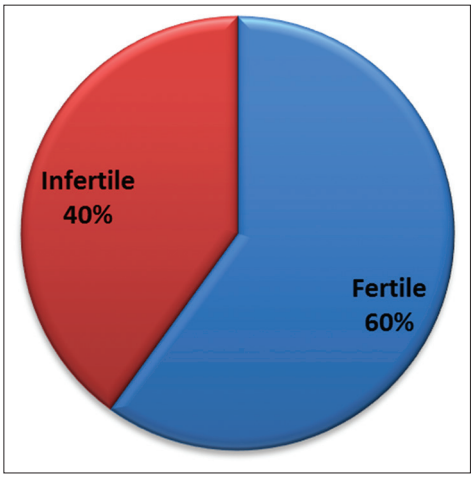

Figure 6: Distribution Infertility among the married people

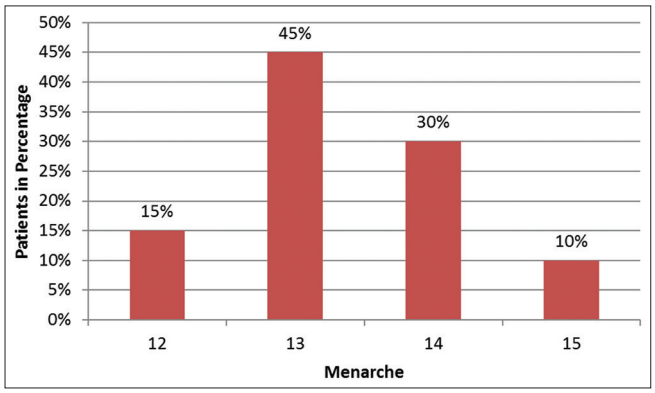

Figure 4: Distribution of age at menarche

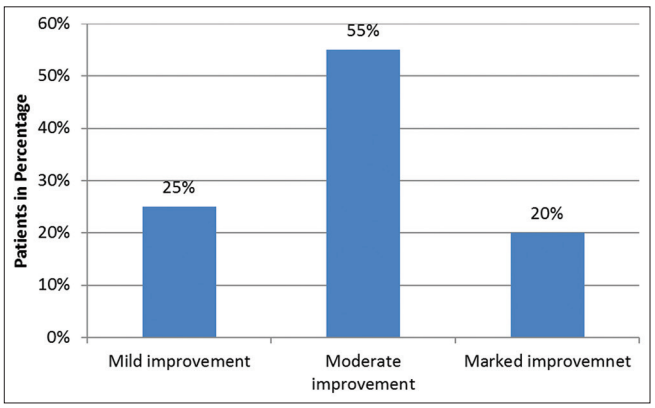

Figure 7: Distribution of the result of treatment

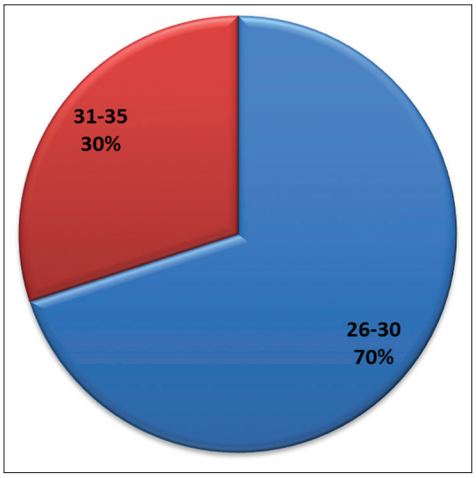

Figure 5: Distribution of patient's body mass index

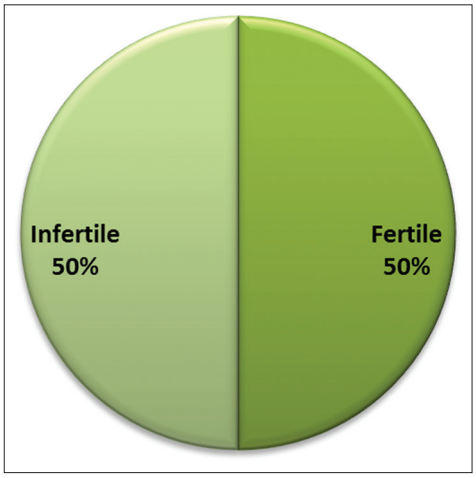

Figure 8: Distribution of fertility at the end of the treatment

PCOD may occur at a younger age in girls who develop early pubarche and thelarche. Therefore, the diagnosis and workup should be considered in young girls with risk factors suggestive of PCOD.[8]

95% patients in our study are in middle socioeconomic status where Joshi *et al.* study reported the majority of the participants (73.2%) were adolescents (15-19 years) from lower socioeconomic strata. Venkatarao *et al.* reported 54.2% in lower economic status were there is no middle economic status in both the studies.[9,10]

In our study, 70% were in 26-30 and 30% in 31-35 BMI. Obesity is a common finding in PCOS and aggravates many of its reproductive and metabolic features. The relationship between PCOS and obesity is complex, not well understood, and most likely involves interaction of genetic and environmental factors.[11]

4 patients in 10 married, reported infertility. The prevalence of PCO among ovulatory women with infertility is higher than that in the normal population, suggesting that PCO may, perhaps by virtue of an effect of hyperandrogenemia, contribute to the causes of subfertility in women with regular menses.[12]

CONCLUSION

Polycystic ovarian disease may be one of the most complex female health issues of our time. It is the most common endocrine disorder in women of reproductive age. PCOD is accompanied by a variety of different health issues, many of which directly impact fertility. If permanent diet and lifestyle changes are implemented, risks, and health issues may become obsolete.

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