Original Article

Prevalence of Polycystic Ovary Syndrome in Fourth Year Medical Students of University of Tripoli

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ABSTRACT

Background and objective*. Polycystic ovarian syndrome (PCOS) is considered one of the most common endocrine disorders among women of reproductive age. PCOS is the most prevalent endocrine disorder worldwide that affects 6%–8% of women. It is characterized by enlarged ovaries, chronic anovulation, irregular menstrual cycles, androgen excess, obesity associated with insulin resistance, hirsutism, and infertility. This study aims to find out its prevalence among the female medical undergraduates' students.* **Methods.** *A descriptive cross-sectional study was conducted among 258 females from 4th year medical school, Faculty of Medicine, University of Tripoli from 2013-2014.* **Results.** *Cohort age ranged between 22 – 29 years (mean age 23.8±1.3). We found that 27.9% are overweight (BMI between 25-29), 6.2% are obese (BMI >29), and 3% are underweight (BMI < 18). Only 1.6% had menstrual irregularity and 7.8% has signs of hyperandrogenism (hirsutism and/or acne). The prevalence of polycystic ovarian syndrome was found to be (8.1%).* **Conclusions.** *the prevalence of polycystic ovarian syndrome in our cohort and was found to be similar to other studies conducted in similar settings. As the PCO is associated with endocrine disorders among women, early screening strategy is necessary to prevent lifelong complications.*

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INTRODUCTION

Polycystic ovarian syndrome (PCOS) constitutes the most cases of the endocrine disorder among females [1]. Incidence of PCOS is increasing rapidly due to changes in lifestyle and stress. The prevalence estimate greatly varies, ranging from 6% to 10% [2-4]. Enlarged ovaries, chronic anovulation, irregular menstrual cycles, androgen excess, and insulin resistance with consequences of acne, hirsutism, and infertility problems are main characters of PCOS [5].

The awareness of PCOS prevalence has increased recently because has medical consequences on metabolic aspects (such as metabolic syndrome, obesity, dyslipidemia, and insulin resistance), endocrine disorders (such as diabetes), and cardiovascular diseases (such as hypertension and atherosclerosis) [6].

The aim of our study was to find out the prevalence of PCOS among medical students, which included females of reproductive age group.

METHODOLOGY

A descriptive cross-sectional study conducted in Medical Faculty of University of Tripoli. Data collected from female university medical students of 4th year.

The girl who agreed to participate were asked to fill up questionnaire asking about the details of menstrual history and features of hyperandrogenism. Height and weight both recorded by standard procedures. Body Mass Index (BMI) was calculated. Ovarian ultrasonography was done for all participants. Written consent obtained from the agreed participates.

Statistical analysis was performed by SPSS version 16 and presented as counts and percentages.

RESULTS

The age of girls under the study ranged between 22-29 years with mean age 23.8±1.3. Most of student were single and only 4.65% were married.

Among the 258 participants, 17 (6.6%) had obesity, four (1.6%) participants reported that they had prolonged menses and twenty (7.8%) has signs of hyperandrogenism (hirsutism, acne), twenty-one (8.1%) had both menstrual irregularity and signs of hyperandrogenism (figure 1). No record cases for hypertension, diabetes, hypothyroidism or migraine.
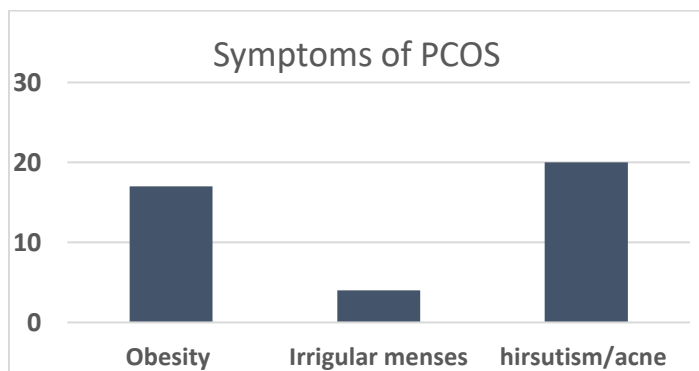

Figure 1: Clinical symptoms of PCOS

Ultrasound pelvis for ovarian assessment showed that 21 girls (8.1%) found to have polycystic ovaries (figure 2). Of them; 9.5% with irregular menstrual cycle, 33.3% with signs of hyperandrogenism and 57.2% ha both (figure 3)
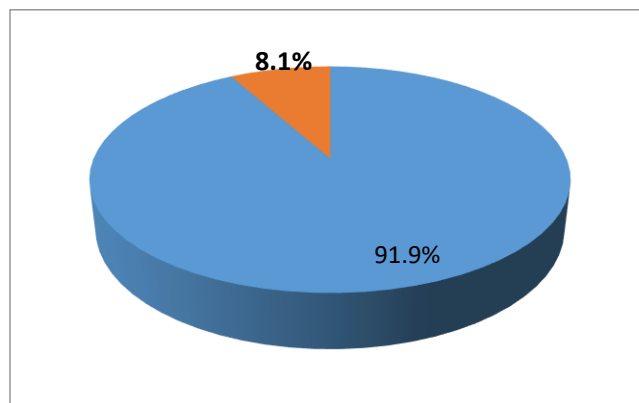

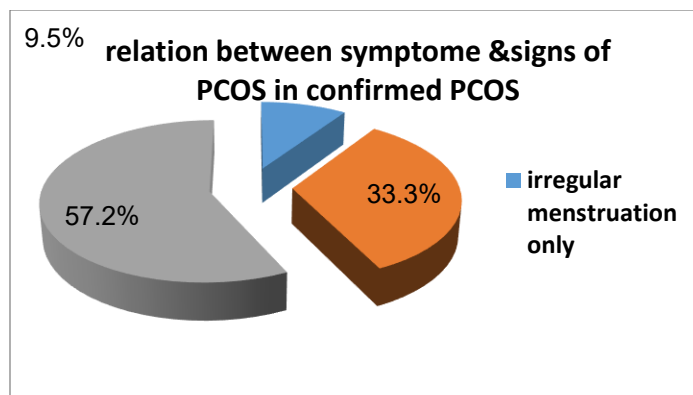*Figure 2: prevalence of PCOS*

Figure 3: Relation between symptom & sings in PCOS cases

Regarding weight of students; we found that 62.9% were with normal weight, 27.9% were overweight (BMI between 25-29) and only 6.6% were obese (BMI >29). In addition, we document that 3% are underweight with BMI < 18 (figure 4).
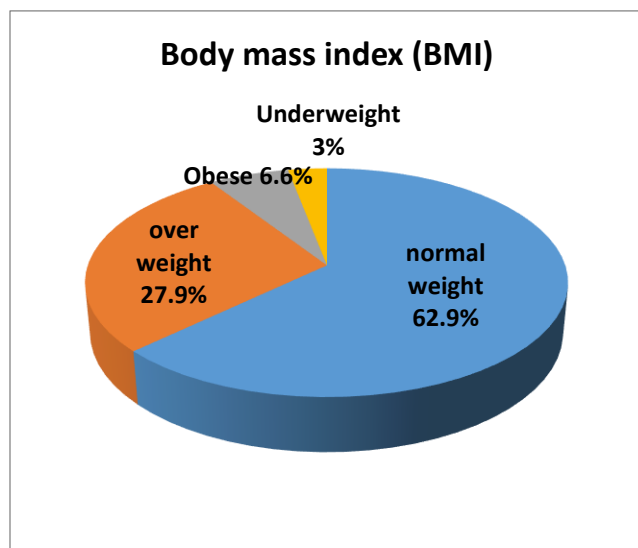
Figure 4: BMI in study group

Students with PCO, in correlation with BMI, we found that 8/21 (38.1%) students with PCOS were normal weight, and other 8 students were overweight and only 5 (23,8%) students were obese [6] (figure 5).
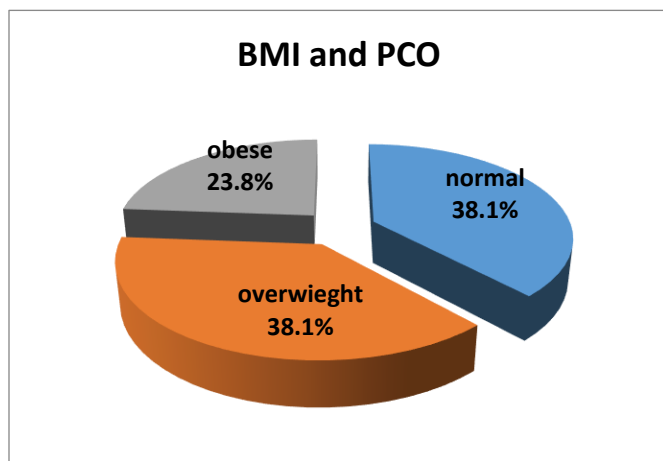

Figure 5: Correlation between Body Mass Index (MI) and PCO patients

DISCUSSION

The worldwide prevalence of PCOS is estimated to be 6-10% [2-4]. In our study, the prevalence was found to be 8.1%, which is similar to the previous literature.

In comparison with Arabic population, our prevalence is slightly higher than the study done among Omani women; it showed the prevalence of PCOS was 7% [7].

Internationally, in literature we found similar prevalence of polycystic ovary syndrome in association with presence of oligomenorrhea and obesity [8-12].

In our study, in students with PCOS, BMI represented, as 38.1% are overweight, 23.8% are obese. This is similar to Sunita et al [13], showed that mean BMI was 27.32 ± 6 in PCOS patients but more than Gill et al [11] who's documented that 24% of patients had BMI > 23 kg /m2.

CONCLUSION

Based on the current findings, PCO is associated with endocrine disorders among women. Therefore, early national screening strategy is necessary to prevent lifelong complications. However, the further studies are needed on larger sample sizes.

Disclaimer

The article has not been previously presented or published, and is not part of a thesis project.

Conflict of Interest

There are no financial, personal, or professional conflicts of interest to declare.

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