

ASSESSMENT OF WOMEN'S KNOWLEDGE LEVEL ABOUT OVARIAN CYST

Ghanim A. Abbas¹ and Meraim A. Kazaal²

^{1,2} Nursing techniques department, Technical Institute of Al-, AL-Furat AL Awsat Technical University, Iraq. ¹ ghanemoaiyz@atu.edu.iq. ² meraim.kazaal@atu.edu.iq

ABSTRACT

Background: The research plan is a field study aimed to identify women's Knowledge about the reasons and symptoms of ovarian cysts and how to prevent them. **Methods:** The study included 40 women who had ovarian cysts and visited the consulting clinics at the Maternity and Children Hospital in Diwaniyah city for the period from 15/11/2019 to 15/12/2019, the information was collected by filling in the questionnaire form and the frequency and percentage distribution were adopted as a statistical method in analyzing the information. **Results:** The results showed that most of the patients are in the age group from 23 to 27 years (37.5%) followed by 28 to 32 years (25%) and 18-22 years (20%) whereas only 5% and 12.5% of patients detected in age groups 14-17 years and ≥ 32 year respectively. The results showed that the highest percentage of ovarian cysts is due to the increase in male hormones by 100%, followed by obesity 87.5%, presence of infections 75% and body's insulin resistance 62.5%. moreover, the most important symptoms ovarian cysts are irregular menstruation (100%), increased hair on the face, chest and thighs (100%), pain in the pelvis (80%) and acne (75%). **In conclusion,** from the most prominent recommendations of the research is health awareness and education for women through various media about the causes of ovarian cysts and ways to prevent this problem through regular review of the specialist doctor, a healthy diet and exercise.

Keywords: Ovarian cysts, reasons, symptoms, women, prevention

I. INTRODUCTION

Ovarian cysts are fluid-filled sacs that develop in or on the ovary. Ovarian cysts occur commonly in women of all ages. Some women with ovarian cysts have pain or pelvic pressure, while others have no symptoms [1,8]. Fortunately, most ovarian cysts do not require surgical removal and are not caused the cancer. Cysts can vary in size from less than one centimeter (one-half inch) to greater than 10 centimeters (4 inches) [2,3]. Ovarian cysts is a group of symptoms related to hormonal imbalance that causes problems in the ovaries and leads to the failure of the egg to develop and not to be released during the ovulation period [4,5]. This hormonal disorder is common among women of childbearing age, causing problems in the ovaries, while it constitutes about 16% in postmenopausal women and is often cancerous. Benign ovarian cysts are common in pre-puberty girls and there are about 68% at the age of (2-12 years) and disappear automatically within 6 months [6,8]. There are various types of ovarian cysts, such as dermoid cysts and endometrioma cysts. However, functional cysts are the most common type. The two types of functional cysts include follicle and corpus luteum cysts. So functional cysts and haemorrhagic ovarian cysts are treated automatically whenever the cyst is small and disappears on its own [7,9].

The exact cause of the ovarian cysts is not known, but among the reasons that help in the occurrence of ovarian cysts are genetic factors, increase the androgens, body resistance to insulin, the presence of infections and obesity [10,11]. In the normal case, the ovaries produce hormones that control the functions of the body which are estrogen and androgen, and in women with cystic conditions, the androgen hormone is higher than estrogen [12,13]. Among the symptoms and signs of polycystic ovaries are irregular menstruation, weight gain, acne, increased hair growth on the face, chest and thighs, dark spots in the skin, especially the neck and armpits, hair loss, oily skin, and pain in the pelvic or lower abdomen and flatulence and may sometimes lead to fever and vomiting [14,15]. Ovarian cysts can be prevented by following a healthy diet, losing excess weight, exercising, observing changes in the menstrual cycle, conducting regular checks, following up with a doctor, abstaining from smoking and caffeine traditions [16]. Among the complications of ovarian cysts are weight gain, type 2 diabetes, cardiovascular disease,

high cholesterol, and uterine cancer [17,18]. The present study aimed to find out women's knowledge about the reasons, symptoms and prevention of ovarian cysts.

II. METHODOLOGY

Study design: This study conducted using descriptive cross sectional survey.

Participants: This study included 40 women suffering from ovarian cysts, and their ages were 14 years and older. Participant women visited the consulting clinics at the Maternity and Children Hospital in Diwaniyah city for the period from 15/11/2019 to 15/12/2019.

Questionnaire: A questionnaire was designed for the participating women and included the following:

1. Age
2. Family history of ovarian cyst.
3. Reasons of ovarian cysts (increased male hormones, obesity, the presence of inflammations, infections and insulin resistance)
4. Symptoms of ovarian cysts (irregular menstruation, acne, hair growth on the face and chest, and spots on the skin).
5. Prevention (follow a diet, exercise, and see a specialist doctor, Reducing drinking tea and coffee)
6. Clinical tests that were done to diagnose ovarian cysts (pelvic ultrasound, Computed tomography scan, magnetic resonance imaging and blood tests)

Statistical analysis: Statistical Package for Social Sciences version 20 (SSPS20) computer software together with Microsoft Excel 2010 were depended for statistical analysis and only results which had a p value <0.05 were considered statically significant.

RESULTS

This study included a collection of a questionnaire of women who suffer from ovarian cysts during the period from 15/11/2019 to 15/12/2019. women' ages were from 14 years and over. The results showed that most of the patients are in the age group from 23 to 27 years (37.5%) followed by 28 to 32 years (25%) and 18-22 years (20%) whereas only 5% and 12.5% of patients detected in age groups 14-17 years and ≥ 32 year respectively as in **figure (1)**.

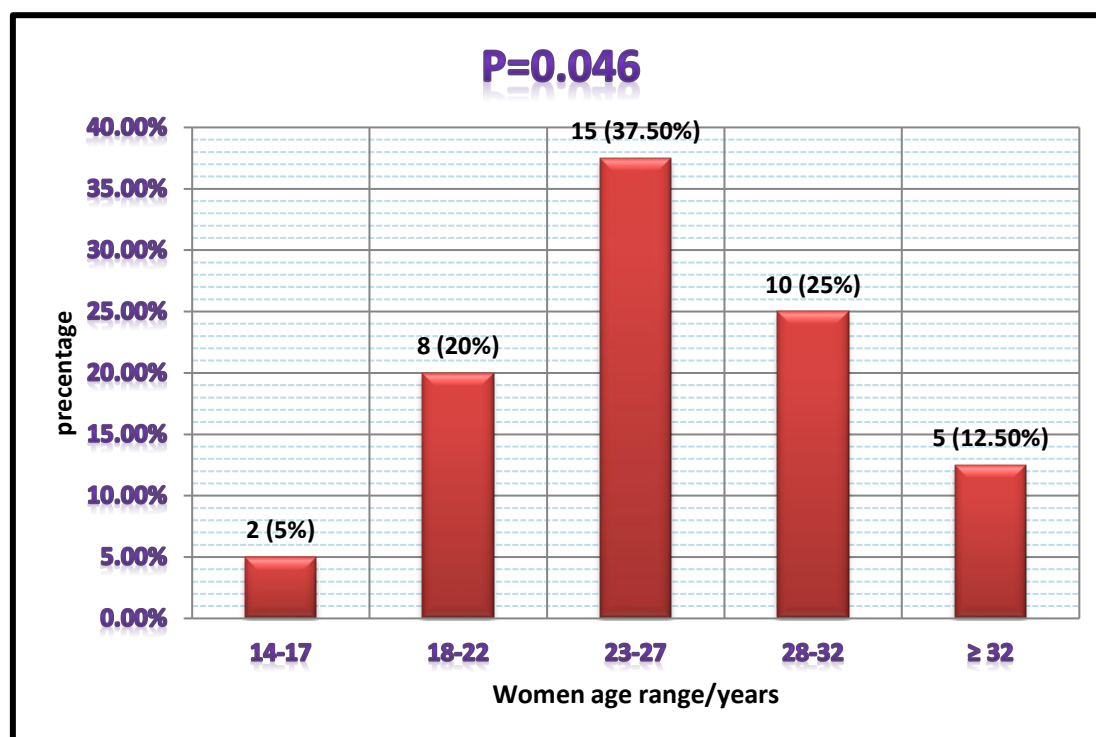


Figure (1): Distribution of women with ovarian cyst according to age range

Knowledge level of women about the reasons of ovarian cysts in table (1) showed that the highest percentage of causes of ovarian cysts is an increase in male hormones (androgens), at a rate of 100%, followed by obesity at a rate of 87.5%, then the presence of infections at a rate of 75%, then the body's resistance to insulin, at a rate of 62.5% while family genetic history was the less common causes of ovarian cyst at rate 12.5%

Table (1): Knowledge level of women about the reasons of ovarian cysts

Reasons	Yes	No	P value
	N (%)	N (%)	
History family / genetics	5 (12.5)	35 (87.5)	0.0005*
Infections/ inflammations	30 (75%)	10 (25%)	0.0026*
Obesity	35 (87.5)	5 (12.5)	0.0005*
Increase male hormones	40 (100)	0 (0)	< 0.0001*
Insulin resistance	25 (62.5)	15 (37.5)	0.0211*

*= Significant difference (p<0.05)

Knowledge level of women about the symptoms of ovarian cysts in **table (2)** showed that the highest percentage of symptoms of ovarian cysts in women are irregular menstruation(100%), Increased hair growth on the face, chest and thighs (100%), pelvic pain (80%), appearance of acne (75%), and the appearance of dark spots in skin (60%) but fever and vomiting appeared as symptoms in some patients at rate 50% and 20% respectively.

Table (2): Knowledge level of women about the symptoms of ovarian cysts

Symptoms	Yes	No	P value
	N (%)	N (%)	
Irregular menstruation	40 (100)	0 (0)	<0.0001*
Acne	30 (75)	10 (25)	0.0091*
Increased hair growth on the face, chest and thighs	40 (100)	0 (0)	<0.0001*
Dark spots in Skin	24 (60)	16 (40)	0.106*
Pelvic pain	32 (80)	8 (20)	0.0012*
Flatulence	15 (37.5)	25 (62.5)	0.0211*
Fever	20 (50)	20 (50)	1.00
Vomiting	10 (25)	30 (75)	0.0052*

*= Significant difference (p<0.05)

Knowledge level of women about the prevention of ovarian cysts in **Table (3)** showed that prevention of ovarian cysts consists of observing changes in the menstrual cycle (100%), regular review of the doctor (87.5%), losing weight (80%), following a healthy diet (75%), exercising (62.5%) and reducing drinking tea and coffee (25%).

Table (3): Knowledge level of women about the prevention of ovarian cysts

Prevention	Yes	No	P value
	N (%)	N (%)	
Healthy diet	30 (75)	10 (25)	0.0091*
Losing weight/regime	32 (80)	8 (20)	0.0012*
Doing sports exercises	25 (62.5)	15 (37.5)	0.0211*
Observing changes in the menstrual cycle	40 (100)	0 (0)	<0.0001*
Regular review of the doctor	35 (87.5)	5 (12.5)	0.0005*
Reducing drinking tea and coffee	10 (25)	30 (75)	0.0052*

*= Significant difference (p<0.05)

III. DISCUSSION

Ovarian cysts can occur at any age but are much more common in women of reproductive age. They are rare after menopause. Luteal cysts occur after ovulation in reproductive-age women [19]. Most benign neoplastic cysts occur during the reproductive years, but the age range is wide and they may occur in persons of any age [20]. Current results (**figure 1**) showed that ovarian cysts present in different age group after puberty especially in women at age range from 23 to 27 years (37.5%) followed by 28 to 32 years (25%), this may be related to increase the hormonal changes or may be the women during this period have little interest in monitoring the regularity of the menstrual cycle or seeing a specialist doctor, which leads to worsening of their ovarian cyst [21]. Other studies remembered that most women of reproductive age develop small cysts each month, and large cysts that cause problems occur in about 8% of women before menopause. Ovarian cysts are present in about 16% of women after menopause and if present are more likely to be cancer [22,23].

Table (1) shows that the highest percentage of causes of ovarian cysts is an increase in male hormones, at a rate of 100%, followed by obesity at a rate of 87.5%, then the presence of infections at a rate of 75%, then the body's resistance to insulin, at a rate of 65%. Change in sex hormones in the body lead to the emergence of cysts due to the increase in androgens [24]. Also, weight gain and insulin resistance, which leads to the body producing sufficient quantities of it, but the cells are not able to use it properly, which makes women more vulnerable to the occurrence of diabetic mellitus type 2 and infections and thus also may be associated with increase the level of the hormone androgens [25].

In the current study, 12.5% of ovarian cysts are due to hereditary causes, and this is consistent with what was mentioned in the previous studies [26,41]. Pelanis *et al.*, (2017) remember that ovarian cyst is known to be inherited genetically with the autosomal dominant manner and 50% of chances are documented of inheritance from mother to daughter [18]. The genetic evidence was documented with the presence of chronic disease either in any of the parents can create unfavorable conditions in wombs associated with the prone of ovarian cyst in their female children [26,27]. Autosomal dominant transmission may link-up with single gene defect, but ovarian cyst is known as polygenic pathology. It may happen due to one of the possible angles are specific gene in any families may have a predominant effect and stimulates the phenotypic manifestation [27]. The ovarian cyst women will show the higher values in both the testosterone and androgen hormonal levels and further it contributes to the unbalanced menstruation, acne, weight gain, which leads to obesity and infertility [28]. Women with ovarian cyst suffer from the symptoms of excess androgen, reproductive dysfunction and metabolic complications; which involves insulin resistance and compensatory hyperinsulinemias associated [29, 30]. The ovarian cyst is connected with the development of obesity and insulin resistance; further finally leads to type 2 Diabetes [26].

Table (2) showed that the highest percentage of symptoms of ovarian cysts in women are irregular menstruation(100%), Increased hair growth on the face, chest and thighs (100%), pelvic pain (80%), appearance of acne (75%), and the appearance of dark spots in skin (60%) but fever and vomiting appeared as symptoms in

some patients at rate 50% and 20% respectively and that this symptom of ovarian cysts results due to the high percentage of androgens, which is the male hormone in the women, the irregularity of the menstrual cycle, an increase in weight, hair growth in unusual places on the face, chest and thighs, and the appearance of small cysts inside the ovaries and the enlargement of the ovaries through an ultrasound examination and the ineffectiveness of the insulin hormone receptors, which leads to increased insulin secretion in the body and disturbances in the level of fats in the body [31,32].

Table (3) shows that prevention of polycystic ovaries consists of observing changes in the menstrual cycle by 100%, regular review of the doctor by 87.5%, losing weight by 80%, following a healthy diet by 75% and exercising by 62.5%. Monitoring the menstrual cycle and its regularity is very important to prevent polycystic ovaries. And regular review of the doctor to check the health status and follow a healthy diet to lose weight while preserving the main nutrients and exercising to get rid of weight and promote insulin sensitivity because this disease is affected by caloric burning disorder, insulin and weight gain. [33,34,35].

In other studies, weight loss is recommended as first-line therapy for the management of infertility in overweight and obese women with ovarian cysts. Anovulation and pregnancy loss are linked with obesity. In addition, obesity is associated with a reduced response to fertility treatments including clomiphene citrate, gonadotropins, and laparoscopic ovarian diathermy [36,37]. Observational studies indicate that weight loss of 5%–10% can increase ovulation and pregnancies. Bariatric surgery has been shown to improve cycle regularity, increase ovulation, and increase spontaneous conception.[38,39, 40].

IV. CONCLUSION AND RECOMMENDATION

Based on the assessment of women's knowledge in the city of Diwaniyah about ovarian cysts, the current study showed that most of the women who suffer from a ovarian cyst are within the age range from 23 to 27 years, and the main reason for this was high androgens and obesity, which led to signs, the most prominent of which are menstruation and hair growth in the chin, chest and thighs, therefore, it is necessary to pay attention to awareness-raising through the media about the danger of ovarian cysts to health and in particular reproductive health by monitoring the times of the menstrual cycle, reviewing the medical, diet and practicing sports exercises.

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