Original Research Article

Evaluating the Perception and Awareness of Patients Regarding Ovarian Cysts in Peshawar, Pakistan

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Abstract

Purpose: To evaluate patients' perception regarding ovarian cyst as well as their awareness of the symptoms and health management of the disease.

Methods: A quantitative research approach was used to conduct this study. Patients were selected from the Gynecology wards, Hayatabad Medical Complex, Peshawar and a questionnaire was designed to evaluate the patients' knowledge and awareness.

Results: When women were asked if they had prior knowledge about the ovarian cyst, 37 (58.7 %) responded that they were first told by the physician during their visit to the clinic or hospital while the patients responded, "Still don't know" are 22 (34.9 %). With respect to educational level of the patients, they seemed to be less aware of the disease. Their perception regarding the disease is that they had a "water filled" balloon or tumor.

Conclusion: Prior to discharge of an ovarian cyst patient from the hospital, she should be counseled on the disease and successful treatment outcomes. Counseling of the patients may result in compliance with therapy, good quality of life and lower economic burden.

Keywords: Ovarian cyst, Menstrual cycle, Awareness, Perception, Treatment outcomes

INTRODUCTION

Ovarian cysts are usually on the ovary surface and are like pockets or sacs filled with fluid. These cysts may or may not produce physical unease and are usually benign. Events of ovarian cysts are of two types, they could be functional/physiologic such as follicular and corpus luteum cyst or pathologic such as endometrioma, mucinous or serous cystadenoma [1]. Many ovarian cysts dissolve without treatment because they are generally functional in nature [2]. Menstrual disorders can be of different types. This may include periods which range from painful heavy bleeding to no periods. The patterns of menstrual cycle have many variations. Females should only worry when generally the bleeding starts before 21 days or greater than 3 months apart and if the bleeding persists for more than 10 days. This reproductive problem is more likely to affect females in the age group of 30-60 years [3]. In USA about 30 % women with a regular cycle, about 50 % in women with irregular cycle, and 6% postmenopausal women have ovarian cysts [4]. About 4 % ovarian cysts are usually reported to cause clinical manifestations in women especially those who are at the age 65. About

18 % simple ovarian cysts are found in postmenopausal women and ovarian mass of any type is about 21 % in older women. Benign cysts can be diagnosed in all age groups [5]. But the prevalence of ovarian cyst in the reproductive age of women is about 7 % [6,7]. The incidence of ovarian cancer is not known exactly in Pakistan but it is the fourth most common cancer and usually diagnosed at an advanced stage. The rates of ovarian cyst are 2-6.5 new cases in 100,000 females every year in Japan and Asian countries. The carcinoma of ovaries presents the 6th most common women cancer and the 4th prominent cause of mortality because of the carcinoma in females [8]. Many of the cysts are non-cancerous i.e. benign. Out of many, very few cysts become cancerous i.e. malignant. It is not known whether some of the ovarian cysts which are benign can become malignant [9]. It has been reported that malignant deterioration of dermoid cyst greater than six centimeter has greater risk [10]. Thus, the objective of the study is to evaluate the patient's perception regarding ovarian cysts and the awareness of the patients about the symptoms and health management in ovarian cysts.

EXPERIMENTAL

Setting

For the collection of data, the gynecology ward of Hayatabad Medical Complex (HMC), Peshawar was selected. It is a well-equipped, health care setting. People from different regions of Khyber Pakhtunkhwa, FATA and adjacent regions of Afghanistan come to HMC where they are provided with general and specialist services.

Study instrument

A self-developed questionnaire was designed to assess the objectives of the study. Consecutive sampling technique was adopted to cover all the patients having ovarian cyst. Sample size was determined on the basis of previous prevalence of ovarian cyst in the hospital. The content validity of the questionnaire was established by professionals at the Department of pharmacy COMSATS Abbottabad Pakistan.

Ethical considerations

Ethical approval was granted by the ethical committee of the University of Peshawar, Peshawar, Pakistan. Furthermore, written consent to participate was obtained from the respondents.

Data analysis

Descriptive data analysis was applied using SPSS, version 20 to describe the basic features of the data, while appropriate inferential statistical tests (Chi-square and Fisher exact) was used to determine variations in the data. Frequencies and percentages were calculated. $P < 0.05$ was set as the level of significant.

RESULTS

The study enrolled 63 patients to which a questionnaire was delivered. All the included women met the baseline characteristics of the study. The socioeconomic status of subjects is shown in Table 1.

Table 1: Socio-demographic and clinical presentation of patients (n = 63)

Characteristic	Frequency (n = 63)	Percentage (%)
Age		
10-20 years	15	23.8
21-30 years	29	46.0
31-40 years	15	23.8
41-50 years	4	6.3
Level of education		
Nil	39	61.9
Primary	10	15.9
Secondary	6	9.5
higher secondary	4	6.3
Graduate	4	6.3
Marital status		
Single	22	34.9
Married	41	65.1
Reasons for hospital visit		
Pelvic Pain	40	63.5
Ovarian Cyst	12	19.0
Abnormal uterine bleeding	5	7.9
Infertility	6	9.5
Duration of symptoms		
≤ to 12 months	40	63.5
>12 months	23	36.5
Severity of pain		
Mild	6	9.5
Moderate	13	20.6
Severe	35	55.6
Very severe	9	14.3
Type of ovarian cyst		
Follicular Cyst	31	49.2
Hemorrhagic Cyst	9	14.3
Chocolate Cyst	5	7.9
Dermoid Cyst	7	11.1
Serous Cystadenomas	3	4.8
Polycystic Ovary	6	9.5
Ca-Ovary	2	3.2

The results of menstrual history are shown in Table 2. The results show that a majority of the respondents, 27 (42.9 %) are within 19 - 27 days

of menstrual period while those that have regular menstrual cycle are 38 (60.3 %).

Table 2: Menstrual history of the patients (n = 63)

Characteristic	Frequency (n = 63)	Percentage (%)
Menarche		
10 years	5	7.9
11 years	20	31.7
12 years	18	28.6
13 years	12	19.0
14 years	8	12.7
Days between menstrual period		
10-18 days	13	20.6
19-27 days	27	42.9
Above 27	23	36.5
Regular cycle		
Yes	25	39.7
No	38	60.3
Days of menstrual flow		
2-4 days	15	23.8
5-7 days	34	54.0
8-10 days	14	22.2

The patients were asked about their pelvic symptoms which they had experienced during the last six months, for which different responses were received shown in Table 3. A majority of the respondents suffer pain during menstrual period. The value was significant ($p = 0.020$ and $p = 0.000$) with regard to worsening symptoms and severity of pain, respectively. Furthermore, when they were asked about bleeding or spotting in-between menstrual periods, the value was significant with respect to worsening symptoms.

Table 4 shows the intensity of the physical and psychological symptoms experienced by the patients. For respondents who found it difficult to walk as a result of the pain, the values were significant ($p = 0.037$ and $p = 0.011$) with respect to severity of the pain and treatment taken so far, respectively. As far as swing in mood is concerned a majority of the respondents experienced this ($p = 0.002$) with respect to severity of pain.

As shown in Table 5, a significant proportion of the patients visited the physician due to severity of pain ($p = 0.030$). Also, educational level influenced knowledge about cyst with patients with a higher educational level more likely to visit the physician.

Table 3: Pelvic symptoms experienced by patients during the last 6 months (n = 63)

Symptom code	Response, n(%)				P-value*		
	Not at all	*A little bit*	*A great deal*	*Very great deal*	*Symptom getting worse*	*Type of cyst*	*Severity of pain*
1	30(47.6)	17(27)	15(23.8)	1(1.6)	0.950	0.050	0.146
2	4(6.3)	18(28.6)	37(58.7)	4(6.3)	0.020	0.255	0.000
3	19(30.2)	11(17.5)	32(50.8)	1(1.6)	0.686	0.512	0.478
4	44(69.8)	15(23.8)	4(6.3)	0	0.033	0.105	0.062
5	38(60.3)	21(33.3)	3(4.8)	1(1.6)	0.926	0.087	0.403
6	11(17.5)	38(60.3)	14(22.2)	0	0.290	0.064	0.495

Chi-square,*$p \leq 0.05$; **Note:** *1 = Heavy bleeding during your menstrual periods, 2 = Cramping or pain during your menstrual period, 3 = Irregular menstrual periods, 4 = Bleeding or spotting in between your menstrual periods, 5 = Pelvic pain on days other than during your menstrual period, and 6 = Pelvic pressure or fullness*

Table 4: Symptoms experienced by patients during the last 4 weeks (n = 63)

Statement	Response, n(%)					P-value*			
	Never	*Rarely*	*Sometimes*	*Often*	*Always*	*I*	*II*	*III*	*IV*
1	19 (30.2)	16 (25.4)	21 (33.3)	6 (9.5)	1 (1.6)	0.056	0.121	0.037	0.011
2	33 (52.4)	21 (33.3)	5 (7.9)	3 (4.8)	1 (1.6)	0.024	0.015	0.199	0.003
3	7 (11.1)	12 (19.0)	29 (46.0)	9 (14.3)	6 (9.5)	0.835	0.754	0.002	0.433
4	40 (63.5)	17 (27.0)	3 (4.8)	2 (3.2)	1 (1.6)	0.067	0.025	0.065	0.004
5	37 (58.7)	19 (30.2)	5 (7.9)	1 (1.6)	1 (1.6)	0.111	0.031	0.117	0.015

*Chi-square, $p \leq 0.05$ I. Type of cyst; II = Education; III = Severity of pain; IV. Treatment taken so far; 1 = Found it difficult to walk because of pain; 2 = Felt as though your symptoms are ruling your life; 3 = Had mood swings; 4 = Felt others don't understand what you are going through; 5 = Felt your appearance has been affected?

Table 5: Knowledge of ovarian cysts by patients (n=63)

Variable	Frequency, N (%)	P-value		
		Severity of pain	*Education*	*Treatment so far*
Visits to physician in past 6 months	49 (77.7)	0.030*	0.027	0.000*
Visits to emergency in past 6 months	23 (36.5)	0.135	0.000*	0.002*
Knowledge about cyst		0.628	0.001*	0.839
Physician	37 (58.7)			
Family/friends	4 (6.3)			
Still don't know	22 (34.9)			
General health		0.466	0.026*	0.727
Very good	1 (1.6)			
Good	42 (66.7)			
Fair	20 (31.7)			

Chi-square, p ≤ 0.05

Table 6: Different treatment options received by patients (n = 63)

Variable	Frequency (n = 63)	%	P-value*		
			Age	**Type of cyst**	**Education**
Treatments taken so far			0.590	0.093	0.789
Nil	21	33.3			
Surgery	4	6.3			
Medications	38	60.3			
Current surgery			0.149	0.104	0.608
Nil	23	36.5			
Laparoscopy	23	36.5			
Laparotomy	17	27.0			
Current medications					
Antibiotics	44	69.8	0.298	0.032*	0.000*
Analgesics	46	73.0	0.391	0.263	0.438
H_2-blockers	17	27.0	0.579	0.790	0.793
Hormonal preparations	19	30.2	0.636	0.005*	0.021*
Anti-emetics	7	11.1	0.693	0.924	0.582
Multivitamin/supplements	40	63.5	0.005*	0.597	0.530
Anti-diabetics	6	9.5	0.701	0.000*	0.436

Fisher exact test, p ≤ 0.05

Ovarian cysts can be treated by accounting several factors into consideration, it should be decided whether treatment should be started or not. When patients were asked about the treatments they had taken and are receiving, they responded with different treatment options shown in Table 6.

DISCUSSION

The current study aimed to evaluate the perception and awareness of patients regarding ovarian cyst, as this was the study of its own kind. About 63 patients were included in the study during the course of 5 months which is comparable to the previous study [11] where the prevalence of ovarian cyst was 62, majority of the patients were in the age group of 21-30 years which is a childbearing age. Other studies included 20, 22, 47 and 61 patients of ovarian cyst respectively and the common age group was shown to be the childbearing age [6-8,12]. This is because of the ovulation process where follicles continues to form, mature and rupture and sometimes it may not rupture or dissolve but converts into physiologic cysts which may or may not dissolve with the successive menstrual cycles.

Majority of the patients were illiterate which is the possible barrier in getting awareness regarding the ovarian cyst as compared to the other study of US where most of the women had acquired education of more than 12 years of high school

[13]. Education among females is most important especially when the matter is about the awareness of their health and treatment outcomes. About thirty three percent of the patients were married which shows the prevalence of ovarian cyst is more in the married women than the single as compared to the study where it was shown that the chances of ovarian cyst are same in that of single and married women [3]. Majority of the ovarian cyst patients primarily came to the hospital with pelvic pain as this symptom is most common among the ovarian cyst patients. Some of the patients also came for abnormal uterine bleeding and infertility and ovarian cyst was diagnosed accidently as it was shown in previous studies that ovarian cyst may be found accidently during routine checkup [7]. Severe intensity of the pelvic pain in ovarian cyst patients was recorded and other studies had shown this pain to be dull heavy sensation because of the increased size of the cyst [5].

The most common ovarian cyst was the follicular cyst which is consistent with other studies [7,8,12,13]. Usually the impaired ovarian function, uterine pathology and other disorders are responsible for the menstrual irregularities [14]. Ovarian cysts are also often accompanied by menstrual cycle irregularities; it is also one of the causes of ovarian cyst as shown in previous study [11]. The formation of ovarian cyst also affects the normal menstrual cycle, the duration is increased, and flow in some patients may be light or heavy [15].

Most of the patients having ovarian (cyst especially the type of cyst which is recurrent) passes through many social and emotional behaviors as reported in a previous study [16] due to which they feel as their symptoms are ruling their life. The type of cyst matters as some of them are recurrent and difficult to treat, also the education level of patients is less and they can't understand the conditions they are facing. Different mood swings had been recorded especially anger over small matter which was due to the severity of pain, patients become irritable and get angry and annoyed very soon. Patients feel themselves alone and as if nobody understands the condition they are going through and that was statistically significant with respect to education and treatments as discussed earlier the lack of education and treatment outcomes makes the patient emotionally imbalanced.

Most of the married patients had been planning for pregnancy. They had unprotected sex for more than 12 months but were facing problems in getting pregnant due to the ovarian cyst and were taking treatment for infertility; these outcomes are higher than previous one [17] which could be due higher level of education in our respondents. Pain during intercourse (dyspareunia) was significant with different intensities, this finding is consistent with other study where it was reported that dyspareunia is most common in chocolate cyst (endometriosis) and dermoid cyst [18].

Ultrasound was the most common diagnostic test used in the investigation of ovarian cyst. In hospital stay, patients were treated conservatively, laparoscopic surgery and laparotomy; these methods are commonly used for the excision of ovarian cyst [19,20].

Limitations of the study

The results reported in this study are subject to some limitations. The study was conducted in only one Pakistani city of Khyber Pakhtunkhwa State namely, Peshawar, and so the data cannot be generalized to apply to the whole of Khyber Pakhtunkhwa State. Furthermore, the study only involved in-patients, not out-patients, and so the awareness level does not apply to out-patients.

CONCLUSION

The findings of this study indicate that overall awareness level was high among in-patients but this was due to the fact that physicians informed about their diagnosis. Lack of prior knowledge of the disease can be attributed to lack of education, poor understanding of the patients regarding their disease and non-compliance with the medication that were prescribed to them. There is need for counselling of ovarian cyst patients regarding the disease and its successful treatment outcomes, which ultimately, will improve quality of life and reduce patient's economic burden.

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