

Evaluating the Awareness of Females of Regarding Ovarian Cysts in Bhuj, Gujarat

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Abstract

Background and Aim: The ovaries are part of the female reproductive system. There are various types of ovarian cysts such as dermoid cysts and endometrioma cysts. However, functional cysts are the most common type. Aim 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. *Methods:* Females from the different areas of Bhuj district were included in the study. A total of 150 females were approached for the study. The questioner was randomly distributed among the females attending the ward for any of the reason. Out of 150 females, 115 were ready to fill the questioner. rest some females denied for one or the other reason so were excluded from the study. Women were eligible had no previous lung, colon or ovarian cancer diagnosis. *Results:* The majority of the respondents suffer pain during menstrual period. The value was significant ($p = 0.030$ and $p = 0.005$) with regard to worsening symptoms and severity of pain, respectively. Educational level influenced knowledge about cyst with patients with a higher educational level more likely to visit the physician. *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.

Keywords: Educational Level; Menstrual Period; Ovarian Cysts; Reproductive System.

Introduction

The ovaries are part of the female reproductive system. They're located in the lower abdomen on both the sides of uterus. Women have two ovaries that do produce eggs, as well as the hormones named as estrogen and progesterone [1]. Sometimes, a fluid-filled sac called a cyst will develop on one of the ovaries. Based on the studies and theories proposed many women will develop at least one cyst during the life period. In most of the cases, cysts are painless and may don't show any symptoms [2].

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 ovarian cysts which include follicle and corpus luteum cysts. Some women develop a condition called polycystic ovary syndrome. This condition means the ovaries contain a large number of small cysts. It can cause the ovaries to enlarge, and if left untreated, polycystic ovaries can cause infertility [3,4].

Symptoms of an ovarian cyst includes the following: abdominal bloating or swelling, painful bowel movements, pelvic pain before or during the menstrual cycle, painful intercourse, pain in the lower back or thighs,

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breast tenderness, nausea and vomiting. However other than this there are several other symptoms of an ovarian cyst that require immediate medical attention which include: severe or sharp pelvic pain, fever, faintness or dizziness and rapid breathing. These symptoms can indicate a ruptured cyst or an ovarian torsion. Both complications can have serious consequences if not treated early [5].

These cysts can develop in females at any stage of life, from the neonatal period to postmenopause. Most ovarian cysts, however, occur during infancy and adolescence, which are hormonally active periods of development. Most are functional in nature and resolve without treatment [6].

Ovarian cysts are found on transvaginal sonograms in nearly all premenopausal women and in up to 18% of postmenopausal women. Most of these cysts are functional in nature and benign. Mature cystic teratomas, or dermoids, represent more than 10% of all ovarian neoplasms. Ovarian cysts are the most common fetal and infant tumor, with a prevalence exceeding 30% [7].

Often cysts are simply observed over time. If they cause pain, medications such as paracetamol (acetaminophen) or ibuprofen may be used. Hormonal birth control may be used to prevent further cysts in those who are frequently affected. However, evidence does not support birth control as a treatment of current cysts. If they do not go away after several months, get larger, look unusual, or cause pain they may be removed by surgery [8].

Most women of reproductive age develop small cysts each month. 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 [9].

The incidence of ovarian carcinoma is approximately 15 cases per 100,000 women per year. In the United States, ovarian carcinomas are diagnosed in more than 21,000 women annually, causing an estimated 14,600 deaths. Most malignant ovarian tumors are epithelial ovarian cystadenocarcinomas. Tumors of low malignant potential make up approximately 20% of malignant ovarian tumors, whereas less than 5% are malignant germ cell tumors, and approximately 2% are granulosa cell tumors [10,11].

According to Robbins and Cotran Pathologic Basis of Disease, a follicular cyst is defined as a benign ovarian cyst measuring at least 2 cm and lined by granulosa and theca interna cells. The incidence of ovarian cancer is not known exactly in Bhuj 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 [12]. The carcinoma of ovaries presents the 6th most common women cancer and the 4th prominent cause of mortality because of the carcinoma in females. Many of the cysts are non-cancerous i.e. benign. Out of many, very few cysts become cancerous i.e. malignant [13]. It is not known whether some of the ovarian cysts which are benign can become malignant. It has been reported that malignant deterioration of dermoid cyst greater than six centimeter has greater risk. 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.

Materials & Methods

Females from the different areas of Bhuj district were included in the study. For the collection of data, the gynaecology ward of Gujarat Adani Institute of medical science was selected. A total of 150 females were approached for the study. The questioner was randomly distributed among the females attending the ward for any of the reason. Before handing over the questioner they were explained in detail about the questioner and the objectives behind the study and on their willingness they were included in the study. Out of 150 females, 115 were ready to fill the questioner, rest some females denied for one or the other reason so were excluded from the study. Women were eligible had no previous lung, colon or ovarian cancer diagnosis. Women receiving cancer treatment or participating in another screening or prevention trial were not eligible. So at the end sample sizes of 115 females were included in the study. The content validity of the questionnaire was established by professionals at the Department of Gynaecology. Ethical considerations Ethical approval was granted by the ethical committee of the medical institute. Furthermore, written consent was obtained from the participants on their willingness to participate in the study.

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

The patients were asked about their pelvic symptoms which they had experienced during the last six months, for which different responses were received. The results are shown in the table below. The majority of the respondents suffer pain during menstrual period. The value was significant ($p = 0.030$ and $p = 0.005$) with regard to worsening symptoms and severity of pain, respectively. When they were asked about the bleeding or spotting in between menstrual periods, the value was significant with

respect to worsening symptoms.

Table 2 showed 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.

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. The different treatment received included the following: surgery and medications. Majority of the women were treated with medications that include antibiotics, analgesics, H_2 -blockers, anti emetics, multi vitamins/supplements, anti-diabetics.

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

Characteristics	Frequency (n = 115)
Age	
10 - 20 years	17
21 - 30 years	28
31 - 40 years	35
41 - 50 years	35
Level of education	
Nil	20
Primary	14
Secondary	23
Higher secondary	33
Graduate	25
Marital status	
Single	33
Married	82

Table 2: Symptoms experienced by patients during the last 4 weeks

(n = 115)

Statement	Response, n(%)					P- Value*			
	Never	Rarely	Sometimes	Often	Always	I	II	III	IV
1	30	22	26	21	16	0.057	0.223	0.043	0.013
2	40	29	20	12	14	0.03	0.017	0.199	0.004
3	10	25	40	19	21	0.91	0.75	0.002	0.433
4	65	24	9	8	9	0.078	0.034	0.067	0.004
5	50	30	10	16	9	0.112	0.023	0.117	0.010

Chi - square, $p < 0.05$, 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?

Discussion

The current study aimed to evaluate the awareness of patients regarding ovarian cyst. About 115 patients were included in the study during the course of 6 months which is comparable to the previous study, majority of the patients were in the age group of 21-30 years which is a childbearing age. Other studies

included 47 and 61 patients of ovarian cyst respectively and the common age group was shown to be the childbearing age [13]. The reason may be because of the ovulation process where in the follicles continues to form, mature, rupture and sometimes it may not rupture or dissolve but they get converted into the physiologic cysts which may or may not dissolve with the followed successive menstrual cycles. Majority of the patients in the present study

were found to be illiterate which can be considered 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 [4].

Education in any field of life is most important especially when the matter is about the awareness of their health and treatment outcomes. In the present study the education plays an important role in creating awareness among the females in relation to the ovarian cyst. About seventy three percent of the patients were married in our present study which showed that the prevalence of ovarian cyst is more in married women than single as compared to the other study where it was shown that chances of ovarian cyst are same in that of single and married women [14].

Ovarian masses are categorized as functional cysts, benign neoplasms, or malignant neoplasms. In a review of females under the age of 21 undergoing surgery for an adnexal mass, 57.9% of the cases were diagnosed with an ovarian cyst [15]. The prepubertal adolescent is at risk of developing functional cysts due to the failure of involution of follicles. Prepubertal cysts are commonly caused by gonadotropin stimulation of the ovary by the immature hypothalamic-pituitary axis. Millar, et al. found ovarian cysts in 2%-5% of prepubertal females undergoing ultrasound. These cysts are mostly small (<1 cm) and insignificant. In the postpubertal adolescent, cysts result from failure of ovulation or persistence of ovarian follicles [15].

A thorough history and physical should be obtained and diseases of the genitourinary and gastrointestinal tracts should be ruled out when patients present with abdominal pain or a palpable mass. It is important to discuss menstrual cycle, sexual history, and contraceptive methods to help elucidate the cause of symptoms [16]. A pregnancy test and a complete blood count should be ordered immediately in patients who present with abdominal pain to identify the presence of pregnancy, leukocytosis, anemia, and hemorrhage. Ovarian torsion should be suspected if fever, severe pain, and leukocytosis are present. Surgical emergencies including ectopic pregnancy, appendicitis, and ovarian torsion should be managed appropriately [17].

Though ovarian cyst and tumor can be diagnosed clinically, origin and nature of tumor cannot be determined clinically. Histopathological examination of the ovarian tumor is must to find out the origin and the nature of the tumor. Benign tumors can be safely removed by surgery and malignant tumors are

managed according to the type, grading and stage of the tumor. Clinical evaluation, radiological evaluation and histopathological examination are important in the management of the ovarian tumors. The combined efforts of gynecologist, radiologist and pathologist will not only hit the right diagnosis but also track the patient to the right path of management.

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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.

References

1. Waters S. The female reproductive system: The Rosen Publishing Group, 2007.
2. Gordon JD, DiMattina M. 100 Questions & Answers about Infertility: Jones & Bartlett Learning, 2010.
3. Balen AH, Laven JS, Tan SL, Dewailly D. Ultrasound assessment of the polycystic ovary: international consensus definitions. *Human reproduction update* 2003; 9:505-14.
4. Brandt ML, Helmrath MA: Ovarian cysts in infants and children. *Seminars in pediatric surgery*: Elsevier, 2005. pp. 78-85.
5. Delcore R, Cheung LY. Acute abdominal pain. *ACS Surgery, Principles and Practice WebMD Inc* 2002.p.225-40.
6. Helmrath MA, Shin CE, Warner BW. Ovarian cysts in the pediatric population. *Seminars in pediatric surgery*: Elsevier, 1998.p.19-28.
7. Forstner R, Kinkel K. Adnexal masses: characterization of benign ovarian lesions. *MRI and CT of the Female Pelvis*: Springer, 2007.p.197-232.
8. Guillebaud J. *Contraception: your questions answered*: Elsevier Health Sciences, 2011.
9. Wolf S, Gosink B, Feldesman M, Lin M, Stuenkel C,

- Braly P, Pretorius D. Prevalence of simple adnexal cysts in postmenopausal women. *Radiology* 1991; 180:65-71.
10. Cragg JA. Implementation and testing of a Web-based tool for improving communication between ovarian cancer patients and their providers through timely data collection and use. University of Minnesota, 2013.
 11. Brown TJ, Brownlee GR. Therapeutic compositions comprising hyaluronan and therapeutic antibodies as well as methods of treatment. Google Patents, 2014.
 12. Mitchell RN, Kumar V, Fausto N, Abbas AK, Aster JC. Pocket companion to Robbins & Cotran pathologic basis of disease: Elsevier Health Sciences, 2011.
 13. Azhar S, Almas I, Ahmed S, Tajik MI, Murtaza G. Evaluating the Perception and Awareness of Patients Regarding Ovarian Cysts in Peshawar, Pakistan. *Tropical Journal of Pharmaceutical Research* 2014; 13:1361-6.
 14. Houts PS, Doak CC, Doak LG, Loscalzo MJ. The role of pictures in improving health communication: a review of research on attention, comprehension, recall, and adherence. *Patient education and counseling* 2006; 61:173-90.
 15. Zolton JR, Maseelall PB. Evaluation of ovarian cysts in adolescents. *Open Journal of Obstetrics and Gynecology* 2013.
 16. Song AH, Advincula AP. Adolescent chronic pelvic pain. *Journal of pediatric and adolescent gynecology* 2005; 18:371-7.
 17. McWilliams GD, Hill MJ, Dietrich CS. Gynecologic emergencies. *Surgical Clinics of North America* 2008; 88:265-83.
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