

Incidence of breast cancer in women with breast cystAyad yas khudair ¹**Abstract**

This study was aimed to determine the incidence of breast cancer in women diagnosed with breast cyst by ultrasonography. A study was carried out on 124 women aged from 25–70 year suffering from breast cyst, presented between Feb 2016 and Oct 2019. Diagnosis was obtained by case history, clinical signs and physical examination of all women and established with ultrasonography with high-frequency (7.5-10-MHz frequency) to determine the breast carcinoma in breast cyst. Cysts were classified as simple cysts, complicated cysts or complex cyst. Highest percent of breast cyst was recorded in ages ranged from 35-50 year (84.6%). The size of cysts less than 2 cm was 86 (69.4%) while cyst more than 2 cm about 38 (30.6 %). The prevalence of breast carcinoma was 3.23% among other benign breast cyst. This study recorded 72.6% simple breast cyst and 14.5% complicated breast cyst and 12.9 % complex cyst. From this study we can conclude that the prevalence of breast cancer is 3.23% among other benign breast cyst, in addition to ultrasonography is a good idea for confirmation of breast cyst and cancer.

Key words: Breast cyst, Ultrasonography, Simple cysts, Complicated cysts, Breast carcinoma

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Introduction

A breast cyst is a fluid-filled sac within the breast. Breast cyst are the most common cause of benign breast disease, often discovered incidentally or as painful or painless, solitary or multiple masses. One breast can have one or more breast cysts. They are often described as round or oval lumps with distinct edges. In texture, a breast cyst usually feels like a soft grape or a water-filled balloon, but sometimes a breast cyst feels firm [1]. Breast cysts can be painful and may be worrisome but are generally benign. They are most common in premenopausal women in their 30s or 40s. They usually disappear after menopause, but may persist or reappear when using hormone therapy [1]. They are also common in adolescents [2]. Breast cysts can be part of fibrocystic disease. The pain and swelling is usually worse

in the second half of the menstrual cycle or during pregnancy. Breast ultrasound is considered the best option when diagnosing breast cysts because it is 95 to 100% accurate, it provides a clear image on the cyst's appearance (simple or complex) and it may also distinguish between solid lumps and fluid-filled cysts, which a mammogram cannot do [3]. It is estimated that 7% of women in the western world develop palpable breast cysts [4].

Treating breast cysts is usually not necessary unless they are painful or cause discomfort. In most cases, the discomfort they cause may be alleviated by draining the fluid from the cyst. The cysts form as a result of the growth of the milk glands and their size may range from smaller than a pea to larger than a ping pong ball [5]. Small cysts cannot be felt during a physical examination, and some large cysts feel like lumps. However, most cysts, regardless of their size cannot be identified during physical exams. Breast cysts are not to be confused with "milk cysts" (galactoceles), which usually appear during weaning [6]. Surgical removal of a breast cyst is necessary only in a few unusual circumstances. If an uncomfortable breast cyst recurs month after month, or if a breast cyst contains blood-tinged fluid and displays other worrisome signs, surgery may be considered [7].

Aims of this study is to determine the incidence of breast cancer in women diagnosed with breast cyst by ultrasonography.

Patients and methods

A study was carried out on 124 women ranged from 25–70 year suffering from breast cyst, presented between Feb 2016 and Oct 2019, 124 cystic lesions were identified. Diagnosis was obtained by case history, clinical signs and physical examination of all patient women and established with ultrasonography with high-frequency (10-MHz center frequency) transducers, to differentiate the breast carcinoma from breast cyst. Cysts were categorized as simple cysts, complicated cysts or complex cyst according to characteristic identified by ultrasound. Size of the cyst was recorded, nature of cyst also was recorded including the painful or not, multiple or solitary, palpable or incidentally, benign or malignant. This study recorded 72.6% simple breast cyst

Statistical analysis

The SPSS (Version 17) was utilized to analyze the data. For whole variables, a descriptive statistic was used. The categorical scale data process exhibited as mean, frequency, standard deviation, and percentage and a chi-square test was used for its analysis.

Results and discussion

Results of table (1) showed that the highest percent of breast cyst is in ages ranged from 35-50 year (84.6%), while the lowest percent recorded to ages more than 50 years (6.5%) followed by ages less than 35 years (8.9%) and the differences were highly significant ($P > 0.01$). This result is agreed with those obtained by [1] who recorded that the most common breast cyst is in pre-menopausal women in their 30 or 40 years old.

Table 1.

Distribution of breast cysts depending on women age.

Age	No. of patient	Percent %
Less than 35	11	8.9
From 35-50	105	84.6**
More than 50	8	6.5
χ^2 Value		13.8**
** (P<0.01)		

Nature of cyst

Our result showed that 44 cysts were palpable while 80 cysts were incidentally diagnosed, 31 cysts were painful while 93 painless, 115 cysts were solitary and 9 cysts multiple. Results of this study revealed that the size of cysts less than 2 cm were 86 (69.4%) while cyst more than 2 cm about 38 (30.6 %) this result is agreed with finding of Wendie et al [9] whom reported that the most of breast cysts are less than 2 cm.

Table 2.

Classification of breast cyst into three type with their percentage

Nature of cyst	number	Percent %
Simple	90	72.6
Complicated	18	14.5
complex (dysplasia)	4	3.23
Complex	16	12.9
χ^2 Value	---	13.66**
** (P<0.01)		

Our results showed that the prevalence of breast carcinoma was 3.23% among other benign breast cyst, this result is disagreed with Wendie et al [9] whom record 12% prevalence of malignant breast cyst among benign breast cyst. Result of this study recorded 72.6% simple breast cyst, this result is disagreed with those result obtained by Wendie et al [8] whom record 10.7% simple cyst among other types of breast cyst. Our results record 14.5% complicated breast cyst, this result is disagreed with result of Wendie et al [9] whom obtained 25.3% complicated cyst among other types of breast cyst.

Conclusion

From this study we can conclude that the prevalence of breast cancer is 3.23% among other benign breast cyst, in addition to ultrasonography is a good idea for confirmation of breast cyst and cancer.

Ethical Approval

The study was approved by the Ethical Committee.

Conflicts of Interest

The author declare that he has no competing interests.

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