The Actual Practice of Breast Self-Examination among Sample of Iraqi Patients with Breast Cancer

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ABSTRACT

Background : To assess the actual practice of breast self-examination (BSE), as an early detection tool for breast cancer, among a sample of patients affected with breast cancer in Iraq.

Methods: A random sample of 200 female patients with breast cancer was analyzed to evaluate the extent of their actual practice of breast self-examination before the diagnosis of the disease. The examined variables included the age of the patients, marital status, education, occupation, smoking habit, family history of cancer, frequency of gravidity, parity and abortions.

Results: The age of patients ranged from (24-70) years with a mean age of 48 years. The highest frequency of the examined sample (24%) was noted in the age group (50-54) years. The majority of the patients (89%) were married, 33% had university degree and 57% were employed. While 46% of the patients had a family history of cancer, in 33.5% the breast was involved. Only 5.5% of the total number of patients had practiced BSE regularly before the diagnosis of breast cancer, 57.5% had carried out the procedure randomly while 37% did not perform BSE at all during their lives. The study illustrated that the level of education, occupation and family history of cancer had significant roles in the practice of BSE.

Conclusions: The findings of this study emphasize the urgent need for promoting screening in our society through strengthening practical policy decisions to raise the level of public awareness among the Iraqi women towards the adoption of simple approaches for early detection of breast cancer.

Key Words: practice, breast, cancer, self-examination, Iraq.

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INTRODUCTION

The World Health Organization records reported that there are 2,088,849 newly diagnosed cases of breast cancer and 626,679 deaths annually according to the estimates of Globocan, International Agency for Research on Cancer [1]. Globally, breast cancer remains the second most common malignancy after bronchogenic cancer and the most prevalent among women in all developed and developing countries of the world; the incidence rates vary from 27 per 100,000 in Central Africa and East Asia to 96 in Western Europe [2]. While breast cancer ranks as the fifth leading cause of cancer related deaths worldwide, it is the most common cause of mortality in developing regions where there is lack of the basic health care services.

In Iraq, the latest Iraqi cancer registry [3] showed that the total number of breast cancer cases was 4,529 (4,422 in females and 107 in males), of which 989 were newly diagnosed. It remained the most common cancer among the Iraqi population since three decades forming 12.90 per 100,000 populations in general, and 25.66 per 100,000 Iraqi women. During that reference year, breast cancer constituted 18.84% of all cancers in Iraq and 34.7% of cancers that affect women. Although the national program for early detection of breast cancer was established in the Ministry of Health in 2001 [4], local studies conducted by Iraqi researchers show that more than 40% of the cases diagnosed in Iraq are still detected in advanced stages [5-9]; recommending further national efforts to reduce the progression of the disease. In developing countries in

general, the absence of a comprehensive nationwide program to control that cancer is considered the main reason behind the delayed diagnosis and mortality resulting from the disease [10].

In addition to clinical breast examination and diagnostic radiological imaging modalities, breast self-examination (BSE) is one of the simplest methods recommended by WHO as a national screening tool for early detection of breast cancer in countries within the Eastern Mediterranean Region [11]. This easy procedure provides women the opportunity to inspect and search for any possible abnormalities in their breasts by themselves. It is advisable to be carried out by all women after the age of 30 once a month with special emphasis on postmenopausal women; bearing in mind that early detection of breast cancer results

METHODS

The Sample: The analyzed sample comprised **The Questionnaire**: The corresponding tables were organized on the basis of the main objectives of the research. The questionnaire was designed by the researchers of the NCRC and included a set of questions that displayed the correlation of several demographic and clinical characteristics of the affected patients and their compliance with the practice of BSE. The data was collected by the Cancer Registration Department of the NCRC from patients referred to the center for the purpose of receiving artificial breasts following mastectomy. The examined variables comprised the patients' age, marital status, educational level, occupation, smoking habit, family history of cancer, frequency of gravidity, parity and abortions.

The ethical approval was initially obtained by the Ethical Research Committee of the NCRC of the University of Baghdad in accordance with the ethical standards laid down by the Declaration of Helsinki.

questionnaire forms which were completed by 200 female patients diagnosed with breast cancer that visited the NCRC during the years (2016) and (2017).

Statistical Analysis: Data entry was carried out using the statistical program (SPSS), version No. 23. The findings were statistically analyzed and the digital

frequencies and percentages were accordingly calculated. Results were considered statistically significant when p-value was ≤ 0.05.

in better therapeutic outcomes and has a vital role in prolonging survival rates [4].

For the above reasons, the Iraqi Ministry of Higher Education and Scientific Research established the National Cancer Research Program and its affiliated National Cancer Research Center (NCRC) of the University of Baghdad in 2010. The main strategic objectives include promoting public awareness on cancer in general and breast cancer in particular, conducting relevant research studies and training health personnel on the universal methods used for the prevention and early detection of cancer, including clinical and BSE, imaging and pathological techniques. [4, 5, 12].

The main scope of this study was to assess the level of actual practice of BSE among a sample of Iraqi women diagnosed with breast cancer who were referred to the NCRC. 31.5%). Regarding the occupation, (57%) were employed while (37.5%) were housewives. Only (5.5%) were smokers. The rate of response exhibited performing BSE "sometimes" in (57.5%), in which the age group (50-55) years yielded the highest frequency (26.1%). Those who practiced BSE "on regular basis every month" constituted only (5.5%) of the total sample, where the age group (40-44) years formed the highest rate (36.3%). On the other hand (37%) of the sample did not practice BSE at all. There was no significant correlation at all between the practice of BSE and the age of the patients or their marital status Table (2) demonstrates the relationship between family history of cancers and practicing BSE. Overall 54% of the sample did not have a family history of any type of cancer. The remaining 46% displayed positive family history whereby 42% had 1-2 affected members and 3.5% had 3-4 members. The breast site was involved in 33.5%. Significantly higher rates of adherence to BSE were observed among those with positive family history; "yes sometimes" in 51.3% and "yes every month" in 72.7%.

Through exploring the relationship between the frequency of gravidity, parity and abortions with the practice of BSE,

Table (3) illustrates that the highest adoption rates were noted among those who with (4-6) gravidity, (1-3) parity and those who did not have any previous history of abortions. Thus the relationship was not shown to be significant.

RESULTS

Table (1) shows the description of the sample in terms of age groups, marital status, educational level, occupation and smoking habits. The highest frequency (24% of the total sample) was demonstrated within the age group (50-54 years) that was followed by (45-49 years) in 19.5%, while the lowest rate was observed among those below the age of 35 years (6.5%). Overall 89% of the study group was married and the highest educational level of the patients was among those who had the bachelor degree

Table (1): Correlation of patients' age, marital status, education, occupation and smoking habit with the practice of BSE among female breast cancer female patients.

Variables		Practice of BSE						Total	%
		Yes				No			
		Sometimes		Every Month					
		No	%	NO	%	No.	%		
Age Groups (years*)	35>	4	3.5	0	0	9	12.2	13	6.5
	35-39	12	10.4	2	18.2	6	8.1	20	10
	40-44	18	15.7	4	36.3	14	18.9	36	18
	45-49	21	18	1	9.1	17	23	39	19.5
	50-54	30	26.1	1	9.1	17	23	48	24
	55-59	15	13	1	9.1	5	6.7	21	10.5
	≥60	15	13	2	18.2	6	8.1	23	11.5
	Total	115	100	11	100	74	100	200	100
P=0.242									
Marital Status	Married	103	89.6	10	90.9	65	87.8	178	89%
	Unmarried	6	5.2	1	9.1	5	6.8	12	6
	Widowed or Divorced	6	5.2	0	0	4	5.4	10	5
	Total	115	100	11	100	74	100	200	100
P=0.915									
Educational Level	Post-graduate	4	3.5	2	18.2	0	0	6	3
	Bachelor	38	33	5	45.4	20	27	63	31.5
	Diploma	24	20.9	3	27.3	11	14.9	38	19
	High School	16	13.9	0	0	18	24.3	34	17
	Primary School	33	28.7	1	9.1	25	33.8	59	29.5
	Total	115	100	11	100	74	100	200	100
P=0.010									
Occupations	Employed	72	62.6	8	72.7	34	45.9	114	57
	Housewife	36	31.3	1	9.1	38	51.4	75	37.5
	Retired	6	5.2	2	18.2	2	2.7	10	5
	Student	1	0.9	0	0	0	0	1	0.5
	Total	115	100	11	100	74	100	200	100
P=0.017									
Smoking Habits	Yes	8	7	1	9.1	2	2.7	11	5.5
	No	107	93	10	90.9	72	97.3	189	94.5
	Total	115	100	11	100	74	100	200	100
P=0.395									

Table (2): Correlation of the family history of cancer with the practice of BSE.

Variable		Practice of BSE						Total	%
		Yes				No	%		
		Some times		Every Month					
		No	%	No	%				
Family History of Cancer	Yes	95	15.3	8	72.27	25	33.8	92	46
	No	65	48.7	3	72.3	49	66.2	108	45
	Total	115	100	11	100	47	100	200	100
P=0.012									
No. of Affected Relatives	Nil	56	48.7	3	27.3	49	66.2	108	45
	1-2	55	47.8	5	45.5	24	32.4	48	42
	3-4	4	3.5	2	18.1	1	1.4	7	3.5
	5≥	0	0	1	9.1	0	0	1	0.5
	Total	115	100	11	100	47	100	200	100
	%	57.5		5.5		37		100	
P= 0.0									
Type of Cancer	Nil	65	48.7	3	27.3	94	66.2	108	54
	Breast	41	35.7	6	45.4	20	27.2	67	33.5
	Breast + Others	3	2.6	1	9.1	0	0	4	2
	Others	15	13	1	9.1	5	6.8	21	10.5
	Total	115	100	11	100	74	100	200	100
	%	57.5		5.5		37		100	
P=0.00									

Table (3): Correlation of the frequencies of gravidity, parity and abortions with BSE practices.

Pregnancy Variable		Practice of BSE						Total	%
		Yes				No	%		
		Sometimes		Every Month					
		No	%	No	%				
Gravidity	Nil	18	15.7	2	18.2	8	10.8	28	14
	1-3	31	26.9	4	36.3	22	29.7	57	28.5
	4-٦	48	41.7	5	45.5	33	44.6	86	43
	٧-9	14	12.2	0	0	9	12.2	16	8
	10≥	4	3.5	0	0	2	2.7	6	3
	Total	115	100	11	100	74	100	200	100
P=0.924									
Living Births (Parity)	Nil	21	18.3	1	9.1	9	12.2	31	15.5
	1-3	43	37.7	7	36.6	37	50.0	78	43.3
	4-6	41	35.9	3	72.3	25	33.7	69	34.5
	7-9	8	6.9	0	0	2	2.7	10	5
	≥١٠	2	1.7	0	0	1	1.4	3	1.5
	Total	115	100	11	100	74	100	200	100

	%	57.5		5.5		37		100
	P=0.561							
Abortions	Nil	37	63.5	7	63.6	43	45.9	114	75
	1-2	23	27.9	3	27.3	30	40.6	65	32.5
	3-4	8	6.9	1	9.1	8	10.8	17	8.5
	≥ ٥	2	1.7	0	0	2	2.7	4	2
	Total	115	100	11	100	74	100	200	100
	P=0.413							

DISCUSSION

Breast cancer is the second most common cancer worldwide, ranking the first cause of cancer-related deaths among women and the fifth among both sexes. Survival from the disease is significantly lowest in middle-and low-income resource countries; reflecting ethnic disparities in its incidence and mortality rates [1, 2]. While breast cancer incidence is stable or declining in developed countries since 2000, it is steadily rising in the Eastern Mediterranean Region including Iraq [13, 14]. The poor survival rates from breast cancer in this region of the world is due to the advanced stages of the disease at the time of the detection; an inevitable consequence of

inadequate diagnostic and treatment facilities coupled with poor public awareness [4, 5, 14]. WHO emphasizes that early diagnosis of breast cancer and appropriate treatment are the ideal and most appropriate strategies for controlling the disease in developing countries [11].

The method of BSE is considered one of the simplest approaches that enable women to detect breast cancer in its earliest stages, through encouraging them to recognize the natural anatomy and texture of their breasts in order to determine any abnormalities in the future [4, 10-12]. However, it is not recommended to rely on this procedure as an alternative to clinical breast examination, radiology or pathology. According to the US National Breast Cancer Foundation, nearly 70% of breast tumors can be detected by BSE [15]. Although there is no evidence-based data to support the effectiveness of this method as an investigation tool for breast cancer [16, 17], yet it is agreed to urge all females to practice BSE routinely and to report any changes to the healthcare provider as soon as they are

detected; specifically in low-and middle-income resource settings where the costs of screening are very high [15-18].

In Iraq, earlier local studies have illustrated that approximately 90% of the Iraqi women diagnosed with breast cancer usually discover the disease by themselves but unfortunately at advanced stages [7]. Other studies conducted by the NCRC to evaluate the knowledge, attitudes and performance of the Iraqi society regarding breast cancer reported that almost 50% of the educated Iraqi women who have heard about BSE have not practiced the technique at all in their lives; attributing that to the lack of awareness on how to conduct the procedure correctly [12,19]. The level of knowledge scores displayed by the Iraqi women on the means of prevention and early detection of breast cancer were significantly associated with practicing BSE [20].

In the current study it was observed that only 5.5% of the patients had performed regular BSE on monthly basis before they were diagnosed with the disease, 57.5% had practiced that method randomly while 37% revealed no history of previous experience with that technique. In another observational study carried out on breast cancer patients treated in a tertiary care hospital in India it was found that 32% have practiced BSE [21]. A recently published survey was organized by the INCRC to assess the baseline needs for breast cancer awareness, correlating the findings among patients affected by breast cancer during the treatment phase with the corresponding healthy controls to address their level of knowledge, beliefs and behavior towards the disease. That study found that adherence to BSE was significantly higher among breast cancer patients who exhibited, after treatment, a strong belief in the need to promote public awareness on early detection of cancer among the Iraqi society [22].

Data from an earlier study conducted on American patients with breast cancer showed a significant correlation between performing periodic BSE and early stages of the disease; with higher rates of

tumors measuring more than 4 cm among women who rarely practiced BSE [23]. In similar studies, adopting BSE was associated with lower rates of advanced clinical stages of breast cancer, shortened periods between the onset of symptoms and the diagnosis of the disease, smaller tumor sizes and infrequent lymph nodes metastasis [24,25]. It has been reported that despite the increased use of mammography as a safe modality for cancer screening, a large proportion of breast cancer cases are still detected by patients either by self-examination (25%) or incidentally (18%) [25].

As noted in previous reports from Iraq [19, 26], it was found in this study that the greater proportion of those who practiced self-examination was observed among the highly educated and employed sector of the community. Consistent findings were recorded in previous studies [19-22,26,27]. Family history of breast cancer was displayed in 46% of the studied cases and the breast was involved in 33.5%. A significant correlation was elicited with the practice of BSE; whereby 72.7% of those who had family history of cancer replied confidently that they were used to examine their breasts regularly each month. That was specifically noted when the breast was the involved organ reflecting a higher level of awareness towards breast cancer among families in which members are affected by the disease. A previous study from Iraq, focusing on 204 female patients diagnosed with breast cancer who reported positive family history of the disease, demonstrated that 76.5% had one affected relative, 19.1% had two involved while a first degree relative was noted in 43.7%. In the same study the clinical and pathological profiles of those patients did not exhibit distinct markers for their identification; thus recommending regular screening of the target population through promoting education on breast health care as essential approaches to identify the high risk groups in Iraq [28].

COCLUSION

The findings of this study confirms the results of earlier surveys from Iraq [4-9,19,20,28] which illustrated significant knowledge gaps regarding the relative importance of early detection of breast cancer in our society and the urgent need for practical political decisions to raise the level of awareness among Iraqi women through screening. Strengthening the national cancer control plan should be preceded by initiating comprehensive public education campaigns on the signs and symptoms of the disease, risk factors and the recommended approaches to

diagnose breast cancer at its earliest stages. In Iraq, because of the propensity of breast cancer to be detected at younger age groups and relatively advanced stages [4-9], the National Breast Cancer Early Detection and Research Program recommends that Iraqi females should start BSE at the third decade of life and continue throughout; taking into consideration that breast cancers affecting younger women are more aggressive in nature than those detected at older age groups [29,30].

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