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Research Paper

Pattern of presentation of breast cancer in Missan's women

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Abstract

The purpose of the study is to study the pattern of presentation of breast cancer in Missan's women regarding clinical, histopathological and immunological features of malignant breast tissue and focusing on the common presenting pattern and compare it to the neighboring area results. Across sectional study was done. The period of data collection extended from August 2013 to of March 2014. Eighty and five women were involved in the study which was conducted at Al-Shafaa Oncology Center in Missan province. Most frequently of the breast cancer patients were diagnosed at age group of 35-44 years under the stage II. History of lactation was reported in 65.9%, 83.5% were housewives, 69.4% were married. Positive family history was recorded in 32.9%. 52.9% were with stage II. 40.0% of these patients presented in advanced stages III and IV. Most of the cases have history of normal age of menarche and menopause. About 81.2% came from urban areas. Hormonal therapy was reported in approximately 32.9% of cases. The study concludes that the breast cancer is the most common malignancies in women in Iraq and the most of our women with breast cancer do not have risk factor for their disease.

Keywords: *Breast Cancer; Progesterone; Estrogen; HER 2 neu; Missan.*

1. Introduction

Breast cancer is one of the most common malignancies in Iraq, accounting for approximately one-third of all the registered female cancers according to the latest Iraqi Cancer Registry. In Iraq, breast cancer is the most common type of female malignancy [1]. In 2004 approximately one million and a half new cases were diagnosed worldwide [1], [2], [3], [4], [5]. Women who had cancer have five times risk of developing another one [2]. The etiology of breast cancer is multifactorial with genetic factors being relatively more important in pre-menopausal women and environmental factors are more important in post-menopausal women [3], [5], [6]. Although more than 75% of women with breast cancer do not have an obvious risk factor, there is several factors play a role in cancer development [2], [7], [8]. Breast cancer is 3 to4 times more likely to be developed in women with first degree relative who had breast cancer than in those who don't have family history [2], [9]. The risk is further increased if two or more of first degree relatives are affected [10], [11]. Certain races have a significant increase in likelihood of developing breast cancer like Ashkenazi Jewish descent [4].

2. Methodology

Across sectional study was done and the data were collected from Al-Shafaa center of oncology in Missan province. The period of data collection extended from15 of August 2013 to 15 of March 2014 .Total number of 85 patients were interviewed. The variables include the age, marital status, number of children, breast feeding, and use of contraceptive pills, menarche, menopause, family history, occupation, address and socioeconomic status.
Other variables were taken from the histopathological reports which include the stage, grade, estrogen receptors (ER), progesterone receptors (PR) and human epidermal growth factor (HER 2 neu) receptors. The data regarding ER, PR were available for 90 cases only and the data regarding (HER 2 neu) receptors were available for 38 cases only.

3. Main results

The total study sample was 170 female patients with breast cancer who attended the oncology center in Missan governorate for treatment and follow up. The mean age of patients was 48 ± 10 year with range 51 year. Most frequency of patient in stage II (52.9 %) within age group 35-44 year was the rate is 31.8%. The peak frequency of breast cancer increased with age until menopause, thereafter it started to decline, showed in table (1) and figure (1). Most frequency of the patients were house wives (83.5%), married (69.4%), with positive history of lactation (65.9%) and negative family history of breast cancer (67.1%), see tables (2, 3, 4 and 5), normal age of menarche and menopause (97.6% and 78.8%) respectively, see tables (6 and 7). The low to moderate socioeconomic status (98.8%), as in table (8). The majority came from urban areas (81.2%), see table (9). Regarding ER, PR and HER 2 neu, the rates are (44.5%, 55.6% and 60.5%) were positive respectively, see table (10). All were with ductal carcinoma, 97.6% except two who had medullary carcinoma 2.4%, table (11). The most common histological grade recorded in the study was grade II (moderate differentiation) of tumor cells and the most of them did not use contraceptive pills, see tables (12 and 13) and figures (2 and 3).

Table 1: Distribution of Cancer Stage According to the Age Group.

		Stage of malignancy									
		Stage I		Stage II		Stage III		Stage IV		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
Age of patient in years	25-34	0	0	2	28.6	4	57.1	1	14.3	7	8.2
	35-44	2	7.4	17	63.0	6	22.2	2	7.4	27	31.8
	45-54	3	12.0	10	40.0	8	32.0	4	16	25	29.4
	55-64	1	5.3	12	63.2	4	21.1	2	10.5	19	22.4
	65 =<	0	0	4	57.1	3	42.9	0	0	7	8.2
	Total	6	7.1	45	52.9	25	29.4	9	10.6	85	100

p value = 0.66

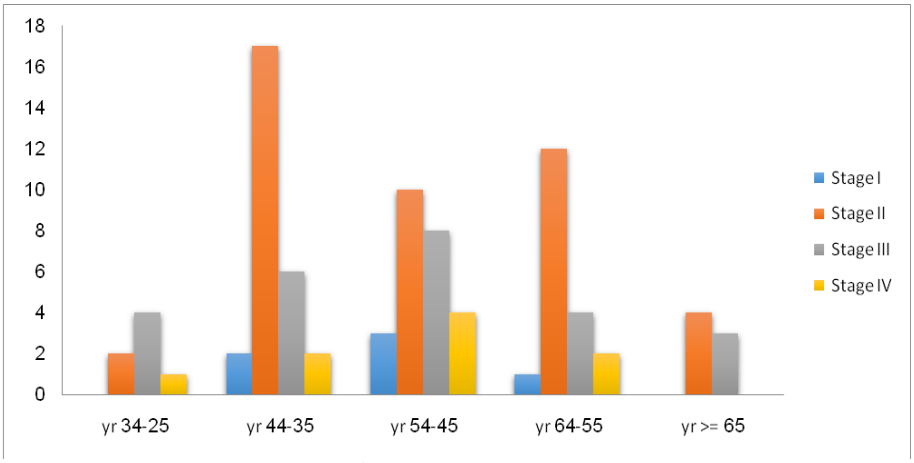

Fig. 1: Distribution of Cancer Stage According to the Age Group.

Table 2: Distribution of Cancer Stage According to the Occupation.

		Stage of malignancy									
		Stage I		Stage II		Stage III		Stage IV		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
Occupation of patient	Housewife	5	7.0	40	56.3	20	28.2	6	8.5	71	83.5
	Employer	1	7.1	5	35.7	5	35.7	3	21.4	14	16.5
	Total	6	7.1	45	52.9	25	29.4	9	10.6	85	100

P= 0.38

Table 3: Distribution of Cancer Stage According to the Marital Status.

		Stage of malignancy									
		Stage I		Stage II		Stage III		Stage IV		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
Marital status of patient	Single	1	7.1	7	50.0	3	21.4	3	21.4	14	16.5
	Married	5	8.5	30	50.8	18	30.5	6	10.2	59	69.4
	Widow	0	.0	4	50.0	4	50.0	0	.0	8	9.4
	Divorce	0	.0	4	100.0	0	.0	0	.0	4	4.7
	Total	6	7.1	45	52.9	25	29.4	9	10.6	85	100
P= 0.50											

Table 4: Distribution of Cancer Stage According to Lactation.

		Stage of malignancy									
		Stage I		Stage II		Stage III		Stage IV		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
Breast feeding	Yes	4	7.1	28	50.0	19	33.9	5	8.9	56	65.9
	No	2	6.9	17	58.6	6	20.7	4	13.8	29	34.1
	Total	6	7.1	45	52.9	25	29.4	9	10.6	85	100
P= 0.60											

Table 5: Distribution of Cancer Stage According to the Family History.

		Stage of malignancy									
		Stage I		Stage II		Stage III		Stage IV		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
Family history	Positive	2	7.1	14	50.0	9	32.1	3	10.7	28	32.9
	Negative	4	7.0	31	54.4	16	28.1	6	10.5	57	67.1
	Total	6	7.1	45	52.9	25	29.4	9	10.6	85	100
P= 0.98											

Table 6: Distribution of Cancer Stage According to the Age of Menarche.

		Stage of malignancy									
		Stage I		Stage II		Stage III		Stage IV		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
Menarche	Early	1	100.0	0	.0	0	.0	0	.0	1	1.2
	Normal	5	6.0	44	53.0	25	30.1	9	10.8	83	97.6
	Late	0	.0	1	100.0	0	.0	0	.0	1	1.2
	Total	6	7.1	45	52.9	25	29.4	9	10.6	85	100
P= 0.027											

Table 7: Distribution of Cancer Stage According to the Age of Menopause.

		Stage of malignancy									
		Stage I		Stage II		Stage III		Stage IV		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
Menopausal period	Early	0	.0	1	100.0	0	.0	0	.0	1	1.2
	Normal	4	6.0	34	50.7	20	29.9	9	13.4	67	78.8
	Late	2	11.8	10	58.8	5	29.4	0	.0	17	20.0
	Total	6	7.1	45	52.9	25	29.4	9	10.6	85	100
P= 0.67											

Table 8: Distribution of Cancer Stage According to the Socioeconomic Status.

		Stage of malignancy									
		Stage I		Stage II		Stage III		Stage IV		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
Socioeconomic status of patient	Low	1	2.9	23	67.6	8	23.5	2	5.9	34	40.0
	Moderate	5	10.0	21	42.0	17	34.0	7	14.0	50	58.8
	High	0	.0	1	100.0	0	.0	0	.0	1	1.2
	Total	6	7.1	45	52.9	25	29.4	9	10.6	85	100
P= 0.33											

Table 9: Distribution of Cancer Stage According to the Residency.

		Stage of malignancy									
		Stage I		Stage II		Stage III		Stage IV		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
Residency of patient	Urban	6	8.7	36	52.2	20	29.0	7	10.1	69	81.2
	Rural	0	.0	9	56.2	5	31.2	2	12.5	16	18.8
	Total	6	7.1	45	52.9	25	29.4	9	10.6	85	100
P= 0.67											

Table 10: Distribution of Cancer Stage According to the Receptor Status.

		Stage of malignancy									
		Stage I		Stage II		Stage III		Stage IV		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
Progesterone receptor	Positive	4	16.0	13	52.0	7	28.0	1	4.0	25	55.6
	Negative	1	5.3	8	42.1	8	42.1	2	10.5	19	42.2
	Equivocal	0	.0	0	.0	1	100.0	0	.0	1	2.2
	Total	5	11.1	21	46.7	16	35.6	3	6.7	45	100
P= 0.6											
Estrogen receptor	Positive	4	20.0	8	40.0	7	35.0	1	5.0	20	44.5
	Negative	1	4.2	13	54.2	8	33.3	2	8.3	24	53.3
	Equivocal	0	.0	0	.0	1	100.0	0	.0	1	2.2
	Total	5	11.1	21	46.7	16	35.6	3	6.7	45	100
P= 0.5											
Her 2 neu	Positive	3	13.0	10	43.5	8	34.8	2	8.7	23	60.5
	Negative	1	7.1	7	50.0	5	35.7	1	7.1	14	36.9
	Equivocal	0	.0	0	.0	1	100.0	0	.0	1	2.6
	Total	4	10.6	17	44.7	14	36.8	3	7.9	38	100
P= 0.9											

Table 11: Distribution of Gross Pathology Types of Breast Cancer.

		Stage of malignancy									
		Stage I		Stage II		Stage III		Stage IV		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
Pathology types	Invasive ductal carcinoma	4	66.7	45	100	25	100	9	100	83	97.6
	Medullary carcinoma	2	33.3	0	.0	0	.0	0	.0	2	2.4
	Total	6	7.1	45	52.9	25	29.4	9	10.6	85	100
P= 0.67											

Table 12: Distribution of Histological Grades of Breast Cancer.

Grade	No	%
Grade I	2	2.4
Grade II	60	70.6
Grade III	23	27.0
Total	85	100

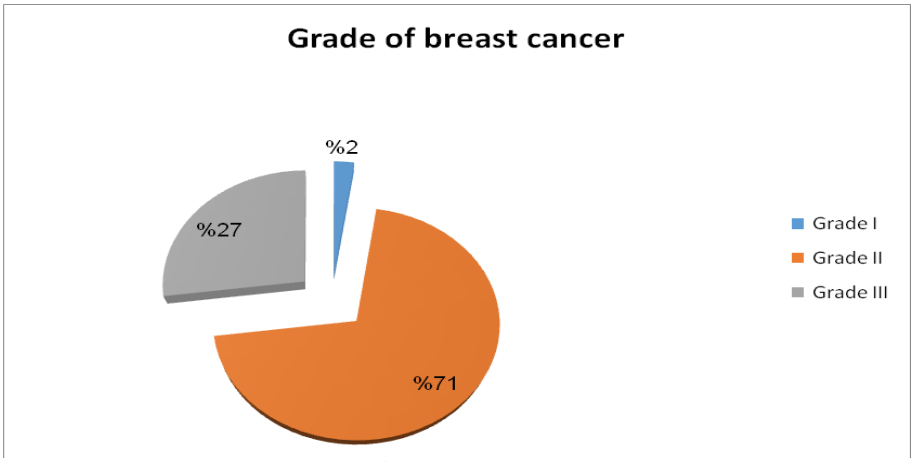

Fig. 2: Distribution of Histological Grades of Breast Cancer.

Table 13: Contraceptive Pills and Breast Cancer Association.

Contraceptive pills	No	%
Yes	28	32.9
No	57	67.1
Total	85	100

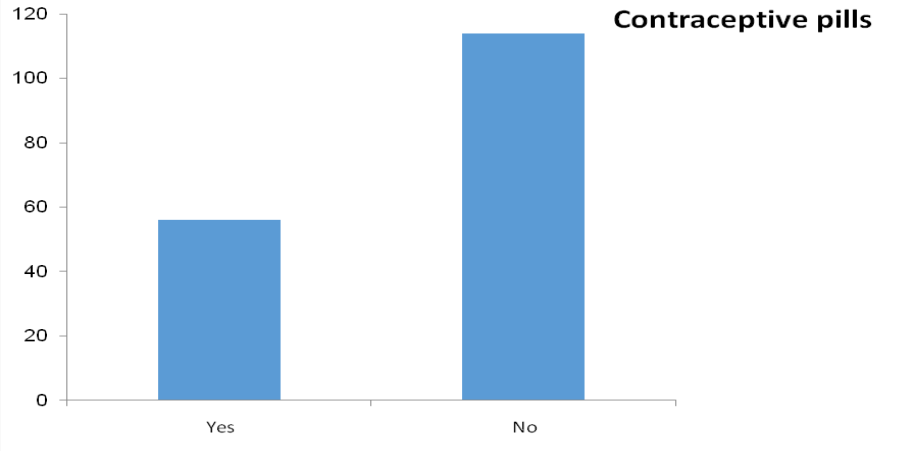

Fig. 3: Contraceptive Pills and Breast Cancer Association.

4. Discussion

According to WHO mortality estimates, cancer is the fourth ranked cause of death in the Eastern Mediterranean Region (EMR), after cardiovascular diseases, infectious/ parasitic diseases and injuries [1].

In Iraq, in addition to being the most important cancer, there are other features including the tendency for this disease to affect younger women, the obvious rise in incidence rates and the prevalence of advanced stages at presentation associated with more aggressive tumor behavior resulting in greater fatality rate that justify increasing efforts for breast cancer control [6]. Most of the patients were diagnosed in their forties, where the peak frequency occurred, while an obvious decline was displayed after the age of 60 years and this agree with [7], [8], [9], [10], [11], and [12].

This continuing trend for this disease to affect younger generations has been comprehensively illustrated in the Iraqi Cancer Registry [1] and other documented reports from neighboring countries [2], [9], [13], [14].

This picture differs from that displayed in reports from western and developed countries; where the peak incidence rates project decades later [3], [12].

In a WHO collaborative project it has been proposed that the younger age distribution in the Arab population could be a reflection of the younger demographic profile [4], [7].

Nearly all of the patients in the study ley in low and moderate socioeconomic status and most of them were with stage II this could explain the poor health education of the general population and their ignorance regarding the significance of clinical breast examination, breast self-examination and early medical consultation [13].
In a critical evaluation of the role of early detection and screening of breast cancer in developing countries, the late stage at presentation has been attributed to be a reflection of the cultural norms which downplay women's health problems [11]. It is believed that the improved survival rates in many cancers in the United States of America and Europe are more related to the earlier stage at presentation rather than to improved treatment [5]. Most of the patients involved in the study were married, housewives, and breast fed their children and with negative family history of breast cancer this agree with another study conducted at turkey [1], [12]. Most of the cases came from urban area, with normal or average age of menarche and menopause and about two thirds of them did not use contraceptive pills [13]. This picture is similar to that study conducted at Egypt [2].
Urban areas had consistently higher incidence of breast cancer [1], [2], [8], [9], [14]. This might be related to higher exposure to xenoestrogens, as well as other endocrine disruptors and genotoxic substances [13]. Regarding the histopathological point of view (44.5%, 55.6% and 60.5%) of the cases tested for estrogen, progesterone and HER 2 neu receptors were positive; these are similar to studies in [8], [9], and [14].
The most frequency grade was grade II and this agrees with another study conducted at Saudi Arabia [14]. This could explain similar behavior at the molecular level of the tumor cells or there may be unknown risk factor or stimulator of malignant transformation or shared unexplained genetic role [11].

5. Conclusion

From our study we can conclude that most of our women with breast cancer does not have risk factor for their disease and this picture is similar to that in other countries in the region, in contrast to western countries where there is risk factors in developing the disease .All of our women have the histopathological type of ductal carcinoma except two only who have medullary carcinoma. (44.5%, 55.6% and 60.5%) where positive for ER, PR and HER 2 neu receptors respectively.

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