Journal of Biology, Agriculture and Healthcare
ISSN 2224-3208 (Paper) ISSN 2225-093X (Online)
Vol., No.6, 2015

The Relationship between Age of Women and Type of Breast Cancer

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Abstract
Breast cancer (Bca) is the most common malignant tumor among women and second cause of death from cancer among females (World Health Organization, 2003) worldwide breast cancer is the second most common type of cancer after lung cancer (10.4%) of all cancer incidences, both sexes counted and the fifth most of cancer death (Horner, 2008: 5).***Aims:*** The present study carried out to identify the relationship between age of women and type of breast cancer.***Subject and Methods:*** Descriptive and analytic study was conducted for the period 1st of November 2011 to1st of march 2012, a purposive sample of (120) women was selected from AL-Sader medical teaching Hospital (center of breast disease) at An-Najaf city who attended for counseling and treatment (first of all diagnostic her breast cancer).***Tools:*** Data were collected through interview of study samples questionnaire format was designed that consisted of three parts ,demographic variables, reproductive variables and variables related to breast cancer, descriptive & inferential statistical procedures were used to analyze the data.***Results:*** Benign breast tumor are more common at women with age class (31-40) year whereas malignant breast tumors were common in women with age class (41-50) years and late age of menopausal at (more than 50 year), also the result indicated that menopausal status and age of menopause were significant relationship with increase for Breast Cancer.***Conclusion and Recommendation:*** The study concluded that malignant breast cancer at An-Najaf city was found to be spread at the women with age of forties and fifties of year while breast benign tumor were found in the younger women and most of them from urban area, Education women about risk factors which can increase the risk of this disease such as obesity, fatty diets and late age of marriage.
Keywords: Breast Cancer, Malicious, Menopause, Technical Teaching University.

1. Introduction

Breast cancer is the second most common cancer after lung cancer (World Health Organization, 2003), moreover, it is the commonest malignancy in females as it constitutes about 3 fold more common than all gynecological malignancies put to gather. and it has become a major health problem in developed world (Horner, 2008: 5). Cancer is caused by both external factors such as chemicals ,radiation and smoking and internal factors such as inherited mutation, hormones and immune condition these causal factors may act together or in sequence to initiate or promote carcinogenesis. Cancer is a major public health problem in many parts of the world about (1529560) new cancer cases are expected to be diagnosed in 2010 (American society cancer, 2010). Because of the environment at south of Iraq has been damage by contamination during 1991aggression and second aggression in 2003 more than one thousand metric ton of depleted uranium weapons are dropped inside the cities during the 2oo3 war this factors and other factors contributing to increase (ca)and its morbidity at the south of Iraq per spirant use as risk factor for breast cancer in Iraq (AL- Azzawi, 2006: 4). There are 16180 new cases registered in Iraq during 2010 at An-Najaf city (Smeltzer, et al, 2008: 1701), breast cancer divided into two type "Benign breast tumor are an abnormal growth that cannot be spread outside the breast to other organs". malignant breast tumors are group of cancer cells that may grow into(invade)surrounding tissues or spread(metastasize) to distant areas of the body (Abeloff, et al, 2009: 1875), of all cancer diagnosed among women worldwide more than (40%) is BCa by the age of 40s, (20%) by the age of 30s slightly more than (2%) by 20s (Fatihallah, 1996: 2) the diagnosis of BCa in early stages have appositive effect on prognosis and allow for breast conservation surgery in appropriate cases (Chen, 2002: 734) this early detection of BCa by population based on screening programs would by potentially useful approach for controlling the disease.

2. Methodology

2.1. The Study Objectives

The study aims to achieving the following objectives:
a. To identify the relationship between age of women and type of breast cancer.
b. To identify the reproductive characteristic of study sample.
c. To identify the demographic characteristic of study sample.

2.2. The Study Hypothesis

To achieve the study objectives, it has been putting one hypothesis as a null form (H_0), as follows:
H_0: There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of

women and type of breast cancer, according to some characteristics.
The study hypothesis branching out, the following six sub-hypotheses:
H_{01}: There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to Menarche Age of women.
H_{02}: There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to Age at Menopause
H_{03}: There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to the Status of Menopause.
H_{04}: There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to the History of Family.
H_{05}: There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to the Lactation Type.
H_{06}: There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to the Place of Residence.

3. Subject and Methods

3.1. The Study Design

A cross section analytic study was conducted in this study to identify the relationship between age of women and type of breast cancer. The study was conducted for the period of 1st of December 2011 to the 1st of march 2012.

3.2. The Study Setting

This study was carried out at Al-Sadder medical city teaching Hospital (center of breast disease) at An-Najaf city who attended for counseling and treatment this hospital is the biggest hospital for all specialists established 1986 and operated by the ministry of health sampling.

3.3. The Study Sample

Anon probability sampling technique was used, a purposive sample of (120) women in different age and selected according to these criteria.
a. Women who have benign or malignant according to diagnosis.
b. Married and non married women.

3.4. The Study Tools & Data collection

a. An interview questionnaire format consisted of the following parts
1. Demographic variable such as age of women, residence
2. Reproductive variable such as menarche age, age of menopausal, family history, type of lactation.
3. Variable related to problem of study such as type of breast cancer, menopausal status.
b. Review of the medical records (case sheet) that helped the investigate for giving the information about medical diagnosis and other investigation that have be done for each women such as x-ray ,blood ,urine and mammography.
c. Validity: To make the instrument more valid, the research tool was reviewed by a panel of expert from different nursing, medical and statistics all experts reviewed the questionnaire and certain modification was done for some items to be more acceptable

3.5. The Study Limitation

Some women refused to participate in the study because of psychological factors and some of them missed information about previous obstetric history so they were dropped from the sample.

4. Results and Discussion

Breast cancer is the top cancer in women in Iraq, comprising about (34%) of all female cancer and it is the second leading cause of cancer related mortality in women today (after lung), in present study the majority of women with breast cancer age between (41-50) years, this result agreed with previous studies in Iraq (Komen, 2006), (Hji, et al, 2002: 222).

4.1. Menarche Age of women

H_{01}: There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to Menarche Age of women.
To test the above hypothesis was used Chi-Square ($\chi 2$) test (Touama, 2011: 149), according to Menarche Age of women**,** and the results of this test shown in Table (1) as follows:

Table 1. Measuring the Relationship according to Menarche Age of women

Menarche Age	Benign		Malignant		Chi-Square ($\chi 2$)	P-value	Result
	No.	%	No.	%			
12 yr<	6	11.8	11	15.9	0.421	0.802	NS
12 yr≥	45	88.2	58	84.1			
Total	51	100	69	100			

Critical value of ($\chi 2$) with (df.=1) and ($\alpha = 0.05$) = 3.841 , NS: Not Significant.

The results in Table (1), shows that:

a. The highest percentage of women who **Menarche age** is (more than 12 year) at benign (88.2%), and (84.1%) for malignant.

b. There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to Menarche Age of women. Which is supported by the calculated (P-value) for Chi-Square ($\chi 2$) value, and the value (0.802) is more than the significance level ($\alpha = 0.05$). This means that will be **accepting** the null hypothesis (H_0), this result supported by (Komen, 2006).

4.2. Age at Menopause

H_{02}: There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to Age at Menopause.

To test the previous hypothesis was used Chi-Square ($\chi 2$) test, according to Age at Menopause**,** and the results of this test shown in Table (2) as follows:

Table 2. Measuring the Relationship according to Age at Menopause

Age at menopause	Benign		Malignant		Chi-Square ($\chi 2$)	P-value	Result
	No.	%	No.	%			
50 yr<	2	5.7	18	21.2	4.261	0.037	S
50 yr≥	33	94.3	67	78.8			
Total	35	100	85	100			

Critical value of ($\chi 2$) with (df.=1) and ($\alpha = 0.05$) = 3.841 , S: Significant.

The results in Table (2), shows that:

a. The highest percentage of women who **Age at Menopause** is (more than 50 year) at benign (94.3%), and (78.8%) for malignant.

b. There was statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to Age at Menopause. Which is supported by the calculated (P-value) for Chi-Square ($\chi 2$) value, and the value (0.037) is less than the significance level ($\alpha = 0.05$). This means that will be **rejecting** the null hypothesis (H_0), this result means that age at menopause is one of the most import reproductive factors which increase the risk of breast cancer, this is similar to the finding of (Hji, et al, 2002: 222) who observed that menopause at (more than 50 year) of age was associated with increase breast cancer risk.

4.3. Status of Menopause

H_{03}: There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to the Status of Menopause.

To test the previous hypothesis was used Chi-Square ($\chi 2$) test, according to women State of Menopausal**,** and the results of this test shown in Table (3) as follows:

Table 3. Measuring the Relationship according to the Status of Menopause

Status of Menopause	Benign		Malignant		Chi-Square ($\chi 2$)	P-value	Result
	No.	%	No.	%			
Premenopausal	46	79.3	38	61.3	4.634	0.023	S
Postmenopausal	12	20.7	24	38.7			
Total	58	100	62	100			

Critical value of ($\chi 2$) with (df.=1) and ($\alpha = 0.05$) = 3.841 , S: Significant.

The results in Table (3), shows that:

a. The highest percentage of women **state of menopausal** is (Premenopausal) at benign (79.3%), and(61.3%) for malignant.

b. There was statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to the Status of Menopause. Which is supported by the calculated (P-value) for Chi-Square ($\chi 2$) value, and the value (0.023) is less than the significance level ($\alpha = 0.05$). This means that will be **rejecting** the null hypothesis (H_0), this result means that status of menopause is one of the most import reproductive factors which increase the risk of breast cancer, this is the same of the results of (Hji, et al, 2002:

222).

4.4. History of Family

H_{04}: There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to the History of Family.

To test the previous hypothesis was used Chi-Square ($\chi 2$) test, according to the History of Family**,** and the results of this test shown in Table (4) as follows:

Table 4. Measuring the Relationship according to the History of Family

Family History	Benign		Malignant		Chi-Square ($\chi 2$)	P-value	Result
	No.	%	No.	%			
Positive	41	89.1	49	66.2	7.944	0.012	S
Negative	5	10.9	25	33.8			
Total	46	100	74	100			

Critical value of ($\chi 2$) with (df.=1) and ($\alpha = 0.05$) = 3.841 , S: Significant.

The results in Table (4), shows that:

a. The highest percentage of women is (89.1%) has **positive history of family** for benign and (66.2%) for malignant.

b. There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to the History of Family. Which is supported by the calculated (P-value) for Chi-Square ($\chi 2$) value, and the value (0.012) is less than the significance level ($\alpha = 0.05$). This means that will be **rejecting** the null hypothesis (H_0), this result agreement with result of (Lodha, et al, 2003) mention, that personal or family history is one of risk factors for breast cancer .

4.5. Lactation Type

H_{05}: There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to the Lactation Type.

To test the previous hypothesis was used Chi-Square ($\chi 2$) test, according to the Lactation Type**,** and the results of this test shown in Table (5) as follows:

Table 5. Measuring the Relationship according to the Lactation Type

Lactation Type	Benign		Malignant		Chi-Square ($\chi 2$)	P-value	Result
	No.	%	No.	%			
Natural	43	89.6	22	30.6	40.419	0.000	S
Artificial	5	10.4	50	69.4			
Total	48	100	72	100			

Critical value of ($\chi 2$) with (df.=1) and ($\alpha = 0.05$) = 3.841 , S: Significant.

The results in Table (5), shows that:

a. The highest percentage of women is (89.6%) used **Natural feeding** for baby at case of benign, and (69.4%) used **Artificial feeding** for baby at case of malignant.

b. There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to the Lactation Type. Which is supported by the calculated (P-value) for Chi-Square ($\chi 2$) value, and the value (0.000) is less than the significance level ($\alpha = 0.05$). This means that will be **rejecting** the null hypothesis (H_0), this result is agreement with result of (AL-Hassani, 2008) who thought that breast cancer decrease risk of incidence of cancer.

4.6. Place of Residence

H_{06}: There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to the Place of Residence.

To test the previous hypothesis was used Chi-Square ($\chi 2$) test, according to the Place of Residence**,** and the results of this test shown in Table (6) as follows:

Table 6. Measuring the Relationship according to the Place of Residence

Lactation Type	Benign		Malignant		Chi-Square ($\chi 2$)	P-value	Result
	No.	%	No.	%			
Urban	34	68	46	65.7	0.076	0.903	NS
Rural	16	32	24	34.3			
Total	50	100	70	100			

Critical value of ($\chi 2$) with (df.=1) and ($\alpha = 0.05$) = 3.841 , NS: Not Significant.

The results in Table (6), shows that:

a. The highest percentage of women is (68%) lived at **Urban** for benign and (65.7%) for malignant.
b. There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer, according to the Place of Residence, Which is supported by the calculated (P-value) for Chi-Square ($\chi 2$) value, and the value (0.903) is more than the significance level ($\alpha = 0.05$). This means that will be **accepting** the null hypothesis (H_0), this result were parallel with study of (Hussein & Aziz, 2006: 54) who found there was a moderate excess in breast cancer incidence in the urban compared with rural area the reason of this regional variation in breast cancer incidence can belong to difference in type of diet, exposure to ultra viol ant light general atmospherics pollution, occupational hazards genetic differences in susceptibility and artifact of diagnosis and record (Doll, 2004: 804).

6. Conclusions and Recommendations

6.1. Conclusions

a. Breast cancer at An–Najaf city was found to be spread in women with age of forties and fifties of age while breast benign tumors were found in younger women.
c. Most of women with breast cancer from urban area and this thing attract attention to the problem of pollution in these area due to many wars happened in Iraq general and southern governorate in particular.
d. There was statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer according to Age at Menopause, Status of Menopause, History of Family, and Lactation Type.
e. There is no statistically significant relationship at the significance level ($\alpha = 0.05$), between age of women and type of breast cancer according to Menarche Age of women**,** and Place of Residence only.

6.2. Recommendations

a. Education women about the risk of breast cancer and how can threat the life to avoid factors which can increase the risk of this disease such as obesity, fatty diet and late age of marriage.
b. Emphasis on women to early attendance at center of breast exam for check and discovery abnormalities in breast and investigation for urine and blood .and other investigation.
c. Collaborative work between the ministry of health and the other sectors to provide health education and health care services for this segment of the population.
d. Further studies should be done with large sample.

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