Study on Breast Cancer Patients and Some Variables in Babylon Province

Zainab Kareem Al-Kazazz [1], Zainab Naser Nabat[1]

[1]*Assistant Lecturer, Babylon Technical Insitute, Al-Furat Al-Awsat Technical University, 51015 Babylon, Iraq.*

Abstract

This study included 100 women with breast cancer in Babylon province for six months at Morjan Teaching Hospital in the Department of Oncology The study showed that the most age group with breast cancer in the age group of 40 to 49 years, where they accounted for 25% of the proportions of patients It was also found in the study that the most affected women lived in the center of the city (Urban Area), where they accounted for 60% of the total patient, Most of them were housewives (not working outside the home), with 77%,And 79% of them were first infected with the disease, And 45% of them had a malignant type of tumor

Keywords: *breast cancer, Babylon, age group, pollution*

Introduction

Cancer is the result of the growth of cells of the body and spread out of control. Most types of cancer cells are ultimately a mass called tumor, called cancer as the body part of the tumor. Most breast cancers are in the breast tissue of the glands to produce milk, and the cancer is in the ducts that connect the lobes to the nipple. The breast also contains fatty, lymphatic and amniotic tissue. [1] Cancer and death are increasing worldwide, especially in developing countries [2] . One of the most common malignant tumors is breast cancer in all regions of the world and ranks first among cancers affecting women in Iraq [3] The breast carcinoma is the more repeatedly identify damage and the secondary major source of loss of life in females in Iraq establish 23% of carcinoma associated with end the little duration for the illness is a straight result to the progress produce at recognize [4] According to the Ministry of Health, the number of cancer cases in 2015 was 25,269. The first breast cancer was 19.1%, the airway and lung (8.1%), leukemia (6.3%), the brain and the central nervous system (CNS) (6.1%), colon and rectum (5.7%), urinary bladder (5.1%) and non-Hodgkin's lymphoma(4.3%) thyroid (3.8%), skin (3.2%), and stomach (3.2%). Breast cancer was the highest cancer for females (25.8 per 100,000 females). In males, however, the highest rate of lung and lung cancer (6.7 / 100,000 male population) [5] . No qualitative etiological factor has been notarized, but different breast cancer-associated vulnerable factors have

been suggested by epidemiological studies; for instance, age, menstrual, menopause, parity, breastfeeding, use of exogenous hormones or oral pill, obesity, lack of exercise, food, smoking, alcohol consumption and family history of breast cancer or other cancers [6]. Exposure to air pollution may also be linked to breast cancer, studies have shown [7] It has been confirmed that contaminated air is involved in lung cancer and is suspected to be associated with other cancers such as ovaries, brain, breast, bladder and cervix. Breast tumors that have been established in animals by chemical compounds give an indication of the potential impact of environmental pollutants [8] The data indicate that the cases of new breast cancer, one third of which are known risk factors and many reasons are unknown and the possibility of environmental conditions may also cause breast cancer [9] The incidence of breast cancer varied to the presence of variables in risk factors [10]. Therefore, the effect of age, place of residence, work and some other variables was studied in this research

Materal and instroment

The study was conducted at the Center of Cancer Oncology of Marjan Educational Hospital of Babylon Health Department where the data were collected by the patients directly Through the distribution of questionnaire forms to patients coming to the center, which included questions such as (age, place of residence ,work ,and type of tumor….etc) The study was conducted during the six months from October 2017 to March 2018 has

been working on the number of 100 cases satisfactory.

Result

The results showed that breast cancer is common in the age group (40-49) and was 25% of the patients as shown in the figure (1).
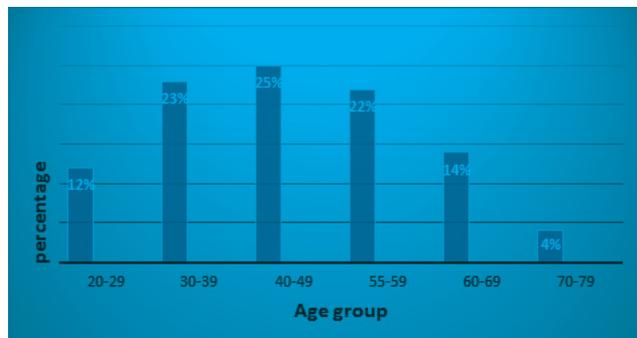

Figure (1) shows the number of infections per age group.

The results showed that the most patients with breast cancer had the ability to live in the center of the city (Urban Area) and the lowest percentage was in rural areas as shown in figure (2).
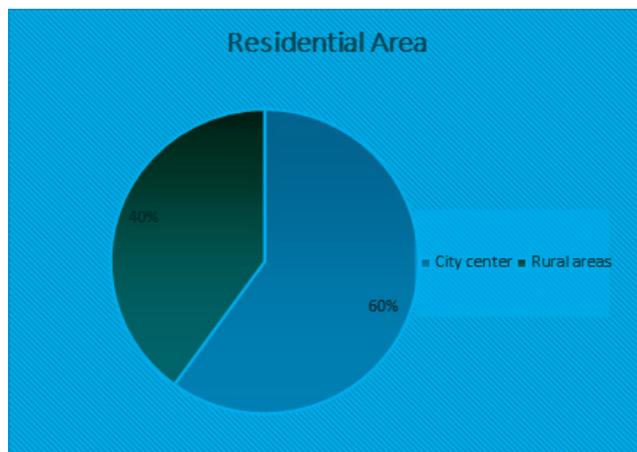

Figure (2) shows the residential area of breast cancer patients

The study showed that most of the patients were not working (housewives) and that the proportion of working women was less as in figure (3).
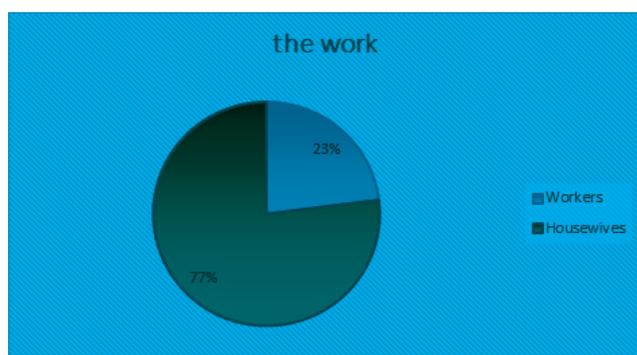

Figure (3) shows the proportion of women working and not working (housewives)

The study also showed that most patients with breast cancer were first infected with 79%, while the remaining 21% were recurrent, The study showed that most of the patients with breast cancer had a malignant tumor of 55% of the infected women, while the remaining 45% had a benign tumor as shown in figure (4).

Figure (4) shows the type of injury and type of tumor for breast cancer patients

Discussion

In this study, we found that the age group most affected by breast cancer is the age group of 40 to 49 years Where they accounted for 25% of the total number of patients.

These results are similar to those obtained by Al-Isawi (2016) in Anbar province where most of the patients were The age group of 41-50 got the highest proportion and had an average lifetime of injury 47.16 years old [3] This result is similar to that obtained by the Iraqi Ministry of Health in its report in 2015 that the highest rate of breast cancer was in the age group 45- 49 where the number of patients 793 and 40- 44 age group was 697 of the total number of 4824 patients for all age groups [5] This result is similar to the results obtained for their study in northern Iraq by Runnak A Majid *et al*.(2009) With a life expectancy of 47.4 years [11] and This corresponds to what Najjar and Eisson received in their study in 2010 which included 12 Arab countries. The average age of patients was $48 + 2.8$ [12] . And these results are also close to the study of Molah Karim *et al*. Which was conducted in 2015 on a group of patients in northern Iraq and their average age was49.4. [13]

In this study, the percentage of infection in the center of the city was higher than rural areas where the percentage of infection in the city center was 60% and in rural areas 40%,The high percentage of infection in the center of the city is due to the high pollution in the center of factories, industries and cars compared to the rural area, which enjoys pure air and health and lack of presence of contaminants This result is similar to the report of the Ministry of Health, where the highest incidence was in the center of the city (Hilla) where the proportion of the proportion of 63.2% compared to the rest of the provinces of Babylon of districts and sub-districts (Musayyib, Mahaweel and Hashimiyah) and rural areas. [5] Polluted air has become a major health problem and the problem is growing every day because the inefficient transport system is the main cause of the

air pollution in large cities. [14] The level of air pollution in congested cities is higher than other parts, which can have serious impacts on human health through impact on water and land ecosystems. Beijing, Tehran, Paulo, Sao, Cairo, Shanghai, Cairo, Bangkok, Mexico City and Jakarta are the most polluted cities in the world. [15] In general, the mortality rate of breast cancer is much greater in the urban population (industrial areas) than the rural population, and the "urban factor" is consistently attributed to the literature of air pollution. [9]

In their studies, researchers found that breast density varied between women living in urban and rural areas. [16] Women living in urban areas have a higher breast density when compared to those living in the rural environment, [17] The cause of high density of non-breast Clearly, exposure to air pollutants may be environmental factors that cause breast density because urban and rural areas have different types of air pollution. [18] Endocrine disorder may result from exposure to air pollutants. [19]

Many gases and solids are carcinogens and mutants, which in turn lead to many types of cancers. [20]

This corresponds to what was obtained by researcher Wei *et.al* (20 12) of a positive relationship between breast cancer incidence and exposure to PAH and NO2, carbon monoxide, sulfur dioxide, volatile organic compounds, micro particles with less diameter About 2.5 microns (PM2.5), [21] and also found Hung *et.al* (2012)that there was a positive relationship between death from breast cancer and exposure to PM2.5. [9]

. The researcher Yaghjyan *et.al* (2017) who conducted a group of women to find out the effect of exposure to air pollution and its relationship to breast cancer, found that the majority of them are from urban areas with 60.3% of those living in rural areas and 39.7% in rural areas. [22]

It was found in the research that most of the patients with breast cancer are female housewives who were not working, where they were 77%, while the least was for working women may be due reasons The incidence of breast cancer may be due to lack of movement of housewives, lack of exercise and obesity due to unhealthy food. As reported by International agency for research on cancer The main cause of breast cancer is not known. Generally, however, the main causes of breast cancer are not known, but they may not be due to physiological behavior. They may also be due to external factors such as weight differences, reproductive behavior, lack of exercise, hormone use, obesity, smoking, fat, and diet. [23] As one of the studies conducted on Iraqi women, most of them do not self-examination of the chest and do not go to the doctor and the reason not to go to the doctor is embarrassment and lack of time and fear of the existence of disease. [24]

Conclusion

In our study, we concluded that the most age group with breast cancer is 40-49, and that urban areas (city centers) are more affected than rural areas, and working women are less affected than housewives**.**

Financial Disclosure: There is no financial disclosure.

Conflict of Interest: None to declare.

Ethical Clearance: All experimental protocols were approved under the Babylon Technical Insitute, Al-Furat Al-Awsat Technical University, 51015 Babylon, Iraq and all experiments were carried out in accordance with approved guidelines.

References

1- American Cancer Society. Breast Cancer Facts & Figures 2017-2018.American Cancer Society, Inc.. Atlanta, GA 30303-1002.2017.

2- Marzban M, Haghdoost AA, Dortaj E. Completeness and underestimation of cancer mortality rate in Iran: a report from Fars province in Southern Iran. Arch Iran Med. 2015;18:160-166

3- Al-Isawi AO, Breast Cancer in Western Iraq: Clinicopathological Single Institution Study, Advances in Breast Cancer Research 2016; 5: 83-89 .

4- Ministry of Health. Annual Statistical Report 2015. Planning Directorate, Ministry of Health, Republic of Iraq (2016).

5- Ministry of Health . Annual Report Iraqi Cancer Registry2015; Iraqi Cancer Registry, Ministry of Health, Republic of Iraq . 2018;P137 .

6- Davies EL. Breast cancer. Medicine, 2012; 40: 5-9.

7- Al-Ahmadi K, Al-Zahrani A. NO2 and cancer incidence in Saudi Arabia. Int J Environ Res Public Health. 2013;10:58445862

8- Shandiz FH , Talasaz ZH . The relationship between breast cancer and air pollution: review articl) Published by: Mashhad University of Medical

Sciences Rev Clin Med. 2017;4(3).

9- Hung LJ, Chan TF, Wu CH, Chiu HF, Yang CY. Traffic air pollution and risk of death from ovarian cancer in Taiwan: fine particulate matter (PM2.5) as a proxy marker. J Toxicol Environ Health A. 2012;75(3):174–182

10- Torre LA, Bray F, Siegel RL, et al. Global cancer statistics, 2012. CA Cancer J Clin. 2015;65:87-108.

11- Majid RA , Mohammed HA , Saeed HM , Safar BM , Rashid RM, Hughson MD. Breast Cancer inKurdish Women of Northern Iraq: Incidence, Clinical Stage, and Case Control Analysis of Parity and Family Risk. BMC Women's Health, 2009; 9: 33.

12- Najjar H, Easson A. Age at Diagnosis of Breast Cancer in Arab Nations. International Journal of Surgery, 2010;8:448-452.

13- Molah SA , Ali Ghalib HH , Mohammed SA, Fattah FH. The Incidence, Age at Diagnosis of Breast Cancer in the Iraqi Kurdish Population and Comparison to Some Other Countries of Middle-East and West. International Journal of Surgery, 2015;13: 71-75.

14- Yazdanparast T, Salehpour S, Masjedi MR. Air pollution: the knowledge and ideas of students in Tehran-Iran, and a comparison with other countries. Acta Med Iran. 2013;51:487-493.

15- -. Khalilzadeh S, Khalilzadeh Z, Emami H. The relation between air pollution and cardiorespiratory admissions in Tehran. Tanaffos. 2009;8:35-40.

16- - Perry NM, Allgood PC, Milner SE, Mokbel K, Duffy SW. Mammographic breast density by area of residence: possible evidence of higher density in urban areas. Curr Med Res Opin. 2008;24(2):365–368.

17- Perry NM, Allgood PC, Milner SE, Mokbel K, Duffy SW. Mammographic breast density by area of residence: possible evidence of higher density in urban areas. Curr Med Res Opin. 2008;24(2):365–368.

18- Tecer LH, Tagil S. Impact of urbanization on local air quality: differences in urban and rural areas of Balikesir. Turkey CLEAN Soil Air Water. 2014;42(11):1489–1499.

19- Kozielska B, Rogula-Kozłowska W, Klejnowski K. Selected organic compounds in fine particulate matter at the regional background, urban background and urban traffic points in Silesia (Poland) Int J Environ Res. 2015;9(2):575–584.

20- Keramatinia A, Hassanipour S, Nazarzadeh M. Correlation Between Nitrogen Dioxide as an Air Pollution Indicator and Breast Cancer: a Systematic Review and Meta-Analysis. Asian Pac J Cancer Prev. 2016;17:419-424.

21- -Wei Y, Davis J, Bina WF. Ambient air pollution is associated with the increased incidence of breast cancer in US. Int J Environ Health Res. 2012;22(1):12–21.

22- Lusine Y, Robert A. Association between air pollution and mammographic breast density in the Breast Cancer Surveilance Consortium. Breast Cancer Res. 2017; 19: 36.

23- International agency for research on cancer. "World cancer factsheet UK 2012." World Health Organization.2014.

24- Alwan N, Al Attar W, Eliessa R, Al-Madfaie Z, and Nedal F. Knowledge and practices of women in Iraqi universities on breast self examination. Eastern Mediterranean Health Journal Past issues .2012;18(7).