

Epidemiological Study of Common Cancer Cases in Baghdad City

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Abstract

Background: It is possible to notice the increase in the incidence of cancer during the recent years in Iraq, particularly in Basrah, Al - Anbar and Baghdad. Different types of cancers like Lung cancer, Breast cancer, Bladder cancer, Colorectal cancer and Pancreas tumors.

Objectives: The objective of the current research was to study the most common cancer cases in Baghdad city.

Method: The current study was conducted in the oncology teaching hospital/medical city/Baghdad, for the period from January 2019 until October 2019. The data of 139 patients were collected from official records in the hospital clinics which included gender, age and the types of cancer.

Results: The highest percentage of cancers was found in patients with breast cancer (54.67 %); followed by colon cancer (16.54 %), ovarian cancer (8.63 %), liver cancer (5.75 %) and prostate cancer (5.03 %). The highest incidence of breast cancer appeared in the age group (40 – 49) years with the percentage of 35.52%. Of the total number of studied cases, 80 (63.30%) of patients with different types of cancer suffered from chronic diseases.

Conclusion: Breast cancer most common types of cancers in Baghdad city, and increased cases in the last year, 2019. Both sexes suffered from cancers especially in age above 40 years.

Keywords: Breast cancer, colon, ovary, liver, prostate, epidemiology.

Introduction

Epidemiology of cancers is important to study the distribution and frequency of different types of cancer diseases among specific area⁽¹⁾. There are different types of cancers in Iraq like breast; colorectal; lung; lymph nodes; ovarian and gastrointestinal cancers⁽²⁾.

The highest frequency of cancers are related with breast cancer. In Iraq, 855 patients with breast cancer were observed in 2016. Thirty-five percent of women with breast cancer was present in the 45 – 54 year age group⁽³⁾. Interpretation of cancer results indicates that there is a noticeable increase in cancer incidence in all regions of Iraq. The reason may be due to the weapons used during wars, as well as due to enormous environmental pollution and accumulation of waste of all kinds in the Iraqi environment, increased unemployment, poverty and eating unhealthy food and others⁽³⁾⁽⁴⁾.

In Tikrit, during (1995 – 2005), the prostate carcinoma recorded the third type of cancers in males. The most risk factors may be causing cancers are: aging,

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smoking tobacco, drugs, radiation exposure, infection with some viruses and bacteria, alcohol drinking, genetic factors, immunosuppression and exposure to some environmental factors ex. Sunlight and heavy metals⁽⁴⁾. So, the objective of the current research is to study the common cancer cases in Baghdad city.

Method

The current study was conducted in the oncology teaching hospital/medical city/Baghdad, for the period from January 2019 until October 2019. The data of 139 patients were collected from official records in hospital clinics which included gender, age and the types of cancer.

Ethical Approval: This study has conducted with ethical approval from oncology teaching hospital/medical city/Baghdad, in order to facilitate the obtaining of information from the medical clinics arriving to it, a number of patients have different types of cancer.

Results

The total of 139 patients with different types of cancer were shown in (Table 1). The highest incidence rates were in breast cancer (54.67 %); followed by colon, ovary, liver and prostate cancers (16.54%, 8.63%, 5.75% and 5.03% respectively).

Table 1: The percentage of patients with different types of cancer

Gall bladder cancer %	Lung cancer %	Colon cancer %	Breast cancer %	Lymph nodes cancer %	Rectum cancer %	Ovary cancer %	Bladder cancer %	Liver cancer %	Pancreas cancer %	Prostate cancer %	Total
1 (0.71)	3 (2.15)	23 (16.54)	76 (54.67)	2 (1.43)	3 (2.15)	12 (8.63)	1 (0.71)	8 (5.75)	3 (2.15)	7 (5.03)	139 (100)

According to table (2), the highest percentage of cancer appeared in women more than in men, as it was 112 (80.57%) and 27(19.42%) respectively. From the current results, it was found that the highest incidence

of type of cancer in men was prostate cancer 7(100%), followed by colon cancer 6(26.08%). In women the highest percentage of one type of cancer was breast cancer 76(100%) followed by colon cancer 17(73.91%).

Table (2): The percentage of patients with different cancers according to gender

Sex	Lung cancer %	Colon cancer %	Breast cancer %	Lymph nodes cancer %	Rectum cancer %	Ovary cancer %	Gall bladder %	Bladder cancer %	Liver cancer %	Prostate cancer %	Pancreas cancer %	Total %
Male	2 (66.66)	6 (26.08)	0 (0)	2 (100)	3 (100)	0 (0)	1 (100)	0 (0)	4 (50)	7 (100)	2 (66.66)	27 (19.4)
Female	1 (33.33)	17 (73.91)	76 (100)	0 (0)	0 (0)	12 (100)	0 (0)	1 (100)	4 (50)	0 (0)	1 (33.33)	112 (80.57)
Total (%)	3 (100)	23 (100)	76 (100)	2 (100)	3 (100)	12 (100)	1 (100)	1 (100)	8 (100)	7 (100)	3 (100)	139 (100)

From table (3), the highest incidence of breast cancer appeared in the age group (40 – 49) years and in percentage of (35.52%); it is followed by ovarian cancer within the same age group with a percentage of (75%). While the highest incidence of prostate cancer was within the age group (70 – 79) years with the percentage

of (71.42%). The results of liver cancer showed that it was almost evenly distributed across age groups (40 – 49), (50 – 59) and (60 – 69) years in percentages that ranged from 25%to 37.5%. As well as colon cancer, it was present in all age groups under study in almost equal percentages.

Table (3): Percentage of patients with different cancer types according to age

Age (year)	Gall bladder cancer %	Lung cancer %	Colon cancer %	Breast cancer %	Lymph nodes cancer %	Rectum cancer %	Ovary cancer %	Bladder cancer %	Liver cancer %	Pancreas cancer %	Prostate cancer %	Total %
20-29	-	-	1 (4.34)	2 (2.63)	-	-	1 (8.33)	-	-	-	-	4 (2.87)
30-39	-	-	4	16 (21.05)	-	-	-	-	-	-	-	20 (14.3)
40-49	1 (100)	2 (66.66)	5 (21.73)	27 (35.52)	1 (50)	-	9 (75)	-	3 (37.5)	2 (66.66)	1 (14.28)	51 (36.7)
50-59	-	-	5 (21.75)	15 (19.73)	-	1 (33.33)	1 (8.33)	-	2 (25)	-	-	24 (17.3)
60-69	-	1 (33.33)	5 (21.73)	13 (17.1)	-	1 (33.33)	1 (8.33)	1 (100)	3 (37.5)	1 (33.33)	1 (14.2)	27 (19.4)
70-79	-	-	3 (13.04)	3 (3.94)	1 (50)	1 (33.33)	-	-	-	-	5 (71.42)	13 (5.4)
Total %	1 (100)	3 (100)	23 (100)	76 (100)	2 (100)	3 (100)	12 (100)	1 (100)	8 (100)	3 (100)	7 (100)	139 (100)

The data of current study appeared that 88 (63.30%) of patients with different types of cancer have chronic diseases (Table 4). Thirty six patients (40.9%) suffered

from diabetes mellitus only; 22 (25%) had hypertension; 30 (34.09%) suffered from diabetes mellitus and high blood pressure (hypertension).

Table (4): The number of patients with different types of cancer who also suffer from chronic diseases coinciding with their cancer

Chronic disease	Diabetes mellitus only (%)	High blood pressure only (%)	Diabetes and high blood pressure (%)	Total (%)
Number	36	22	30	88
Percentage (%)	(40.9)	(25)	(34.09)	(100)

Discussion

The world is witnessing a large increase in the incidence of different types of cancer and this is due to various reasons. The most reasons include exposure to some microorganisms that cause genetic mutations such as infection with EBV; eating unhealthy food or genetically modified foods.

Breast cancers and other types of cancer may be happening as a result of aging and genetic factors. The possibility of infection increases if there are other patients in the same family who had cancer⁽⁵⁾. Ali *et al*, found that the highest prevalence of cancer in Iraqi patients with different types of cancer was breast cancer. It was 33.1% in women attended in Al - Yarmook hospital whereas the bladder and colorectal cancers were

13.5% and 3.7% respectively. This is compatible with the current study; in which the breast cancer incidence was 76 (100%), followed by colon cancer 17 (73.91%)⁽⁶⁾.

In Tikrit city, the prostate tumor recorded the third solid tumor in men. It was seen in 75 (9.1%) cases in a period from January 1995 to December 2005 which was diagnosed by histopathological method. The highest frequency appeared in men with age > 70 years⁽⁷⁾. The result of the current study is compatible with the study of researchers in Tikrit. The prostate cancer recorded (5.03%) (Table 1) with age ranged (70 – 79) years with percentage 71.42% (Table 3).

The results of the current study relating with lung cancer is incompatible with the study of Al – Rahim in 2007. The researcher revealed that 71.8% of males

with a mean age of 63 years attended to medical city hospital at Baghdad had lung cancer⁽⁸⁾ and this does not match with the current research results in which the lung cancers recorded 2.15% (Table 1).

Other studies related with the distribution of breast cancer in different governorates of Iraq. The data obtained from the cancer registries at many hospitals in Basrah which containing the number cases of breast cancer in a period from 2009 to 2012. The incidence rate was 24.49/100000 females⁽⁹⁾. While the percentage of breast cancer in Karbala in (3634) suspected cases (suffering from nipple discharge and breast mass with presence of ulcers during the period from 2001 – 2005 was 9.5%⁽¹⁰⁾.

A study in Erbil/Kurdistan showed that despite of facts related with the majority of women have a good knowledge of breast and cervical cancers; however, most women had an average knowledge of the importance of mammography, Pap smear and early breast cancer detection. Therefore, there is an urgent need to explain the screening program in primary health care hospitals and educational hospitals to raise awareness among women as well as in the media such as television, radio and newspapers⁽¹¹⁾.

In 2017, the incidence of all types of cancer was higher in females than in males in a period from 2008 to 2015 in Karbala⁽¹²⁾ and this similar to the current study. The mortality rate according to infection with different types of cancer increase in Basrah governorate during the period from 2008 to 2016. Lung and bronchus cancer caused the death in 752 (13.2%) from 5719 patients who suffered from different types of cancer, followed by breast cancer which lead to death 606 (10.6%) of patients during 2008 – 2013⁽¹³⁾. In 2018, 75% of Iraqi women with breast cancer, suffered from deficiency of vitamin D3 and calcium. So these two factors may have an impact on the incidence of cancer in women⁽¹⁴⁾.

Iraqi children, aged less than (15) years had acute lymphoblastic leukemia (ALL) in a percentage of 72.5%, whereas acute myeloblastic leukemia in adult was 27.5%⁽¹⁵⁾. All types of cancer increased in the world. Breast cancer incidence ranged from 27 per 100000² in (Asia, Africa) and (Australia, North America and Europe) respectively⁽¹⁶⁾. In United States, the colorectal cancer incidence had spread in patients aged from (49–50) years in percentage 46.1% (50 per 100000 of population)⁽¹⁷⁾.

Conclusion

Breast cancer most common types in Baghdad city and increased in the last year, 2019. Also, Female more than male suffered from Breast cancer, specifically in age between third and fourth decades years.

Ethical Clearance: The Research Ethical Committee at scientific research by ethical approval of both MOH and MOHSER in Iraq.

Conflict of Interest: Non

Funding: Self-funding

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