Scientific report in

Study of cancer disease in old women

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Abstract

Cancer is the leading cause of death among women worldwide, in both high-income and middle-income countries. Cancer is becoming more prevalent in countries of all income levels as the population increases and ages. As population rises, cancer risk factors such as obesity, early menarche, and smoking, as well as environmental contamination and low or late birth rates, become more prevalent. This study included fifty women with various types of cancer. The work was done at Babylon Medical City Hospital. Questionnaires were used to collect information on data such as a woman's age, cancer, marital status, feminine education, social activity of women, such as smoking, hormone treatment, and cancer history. Data was collected and statistically analyzed. The differences were statistically significant at ($p < 0.05$).It is concluded that there is a strong correlation between cancer and the risk factors among most of the parameters used.

Keywords: cancer , types of cancer , cancer incidence, the age

Introduction

About one-third to one-half of cancer cases could be averted based on current knowledge of risk factors (vineis & Wild,2014) . Many risk factors have been implicated in the etiology of cancer including; unhealthy diet, physical inactivity, viral infection, bacterial infection, urban air pollution, ionizing radiation and indoor smoke (WHO,2018). It is expected that, due to changes in population demographics in the next decades, cancer will continue rising to 21.4 million deaths worldwide, by

2030 (Ervik etal,2018). Overall cancer burden, as well as, increased survival rates can be achieved through cancer prevention, early detection strategies (Alharthi,2014) .

According to estimates from the World Health Organization (WHO) International Agency for Research on Cancer (IARC), there were 6.7 million new cancer cases and 3.5 million deaths among females worldwide in 2012.(WHO,2014). Of these, 56% of cases and 64% of deaths were in less developed countries. These numbers are expected to increase to 9.9 million cases and 5.5 million deaths among females annually by 2030 as a result of the growth and aging of the population (Ferlay etal,2013).

Cancer diagnosis is often linked to family medical history, lifestyle choices, or something in the environment. And while you can't control your family history or your whole environment, healthy lifestyle habits such as a good diet, regular physical activity, weight control, and quitting smoking if you're prone to lighting up are all within your control(Bray etal,2013) .

Among females, breast, lung, and colorectal cancers are the three most frequently diagnosed cancers worldwide and in more economically developed countries . In less developed countries, however, the top three most diagnosed cancers are breast, cervix, and lung. Breast, lung, and colorectal cancers are also the leading causes of cancer death among females worldwide, although their relative ranking differs in more and less developed countries. In more developed countries, the leading causes of cancer death are lung, breast, and colorectum, while the leading causes of death in less developed countries are breast, lung, and cervix(Youldenetal,2014)

The survey commences with an overview of the small number of studies that have addressed women's of a variety of cancer symptoms across all forms of cancer .

Materials and Methods

Imam Sadiq Hospital, Babel Oncology Center was selected for this hospital-based survey. The hospital in Hilla where people from other cites also come to seek medical treatment for cancer. All the participants of this study were females who had been randomly selected. A total of 50 participants were selected for this study.

Data collection was assisted by some physician. In 22/2/2022 the questionnaires were completed and collected immediately from patient files. Data were collected with more focus on the most prevalent cancers, namely: breast, lung and bronchus, bladder, brain, cervix, ovary, larynx, stomach, colon, rectum, liver, pancreas, and thyroid, in addition to leukemia, Hodgkin, and non-Hodgkin lymphoma.

Results

The total of 50 patients were included in this study and the incidence rates were : breast cancer (38%), ovary cancer (6%),lung cancer (6%), uterus cancer (6%), colon cancer (6%), cervical cancer (4%), thyroid cancer (4%), Vaginal cancer (4%), bladder cancer (4%) submanidibular lymph cancer (2%), peripheral nerve sheath tumor (2%), kidney cancer (2%), brain cancer (2%), stomach cancer (2%), hodgkin lymphoma (2%), nasopharyngeal cancer (2%), esophagus cancer (2%), pancreas cancer (2%) .

The data showed that the breast cancer had the highest incidence, followed by ovary cancer, uterine cancer , lung cancer ,colon cancer, respectively. According to the data, the common age of breast cancer, was above 40 years with 11 cases (57.89%), followed by 60-70 years age group with 6 cases (31.57%) but the lowest incidence of breast cancer

cases were registered among females that age ranged between 30-40 years and gave only 2 cases (10.52%)

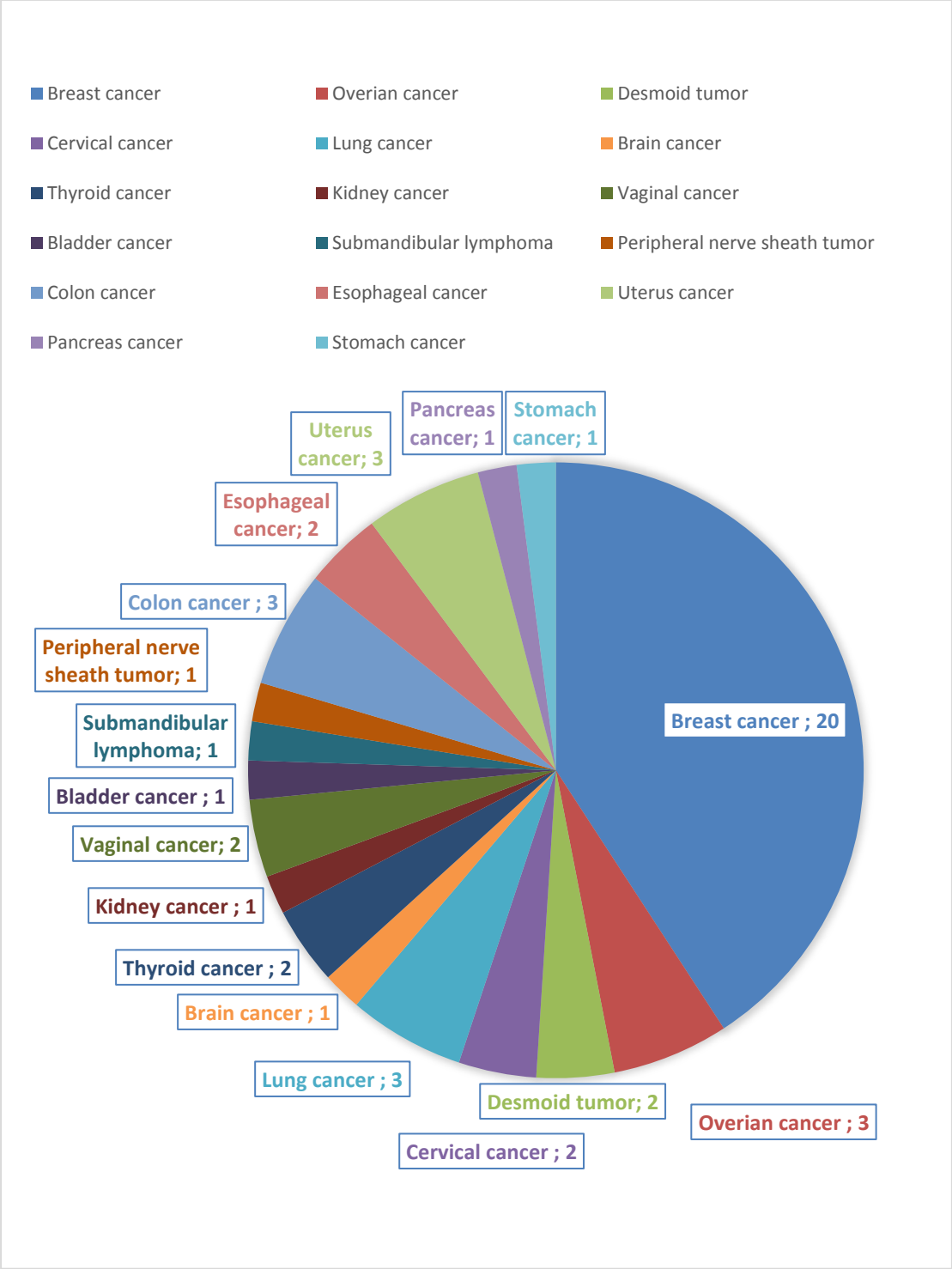

Figure (1) data distribution according to cancer incidence

Table (1) Demographic characteristics of the study population verified according to age (<50 years versus ≥50 years)

Variables	Patients(<50 years	Patients ≥50 years	χ2	Sig.	Odds Ratio	95% CI
Age-groups (Years)						
20-50	6	4	4.50	0.044*	4.51	(1.05-19.25)
50-85	10	30				
Educational states						
Women education	5	29	14.60	0.001*	12.76	3.08-52.32
Non educated women	11	5				
Marital status						
Married	12	28	0.36	0.40	0.64	0.15-2.69
Unmarried	4	6				
Hormonal treatment used						
Hormone therapy	3	27	0.23	0.60	0.89	0.19-4.01
None	13	7				
Family cancer (any cancer)						
No	5	17	1.78	0.15	0.42	0.12-1.50
yes	11	18				
Smoking						
Smoker	2	9	1.23	0.023*	0.39	0.07-2.10
Non-smoker	14	25				

Discussion

A survey of types of cancer disease in Babylon, Karbala, najaf, Baghdad Iraq over the last eight years was designed to determine the prevalence and incidence rate of these malignant diseases, and the results revealed that breast cancer had the highest incidence in females, followed by thyroid cancer, lymphoma, colorectal cancer, bladder cancer, GOC, uterine cancer, and ovarian cancer, respectively. (AL- Nuaimee etal,2020).

Other study were carried out in Al-Yarmook hospital, laboratories department, Baghdad, Iraq. the incidence rates were in breast (33.08%) among women, Breast cancer is the most common cancer among Iraqi women, the current study indicated that the common age group was above 40 years with 25 (58.81%) followed by 60-70 years age group with 14 cases (31.81%).

There are rare studies comprehensively describing the global and regional trends of incidence and mortality of women's cancers (Zuhair etal,2020). cross-sectional study based on the epidemiologic data of Global Burden of Disease 2019.In this study, female patients with breast cancer, cervical cancer,ovarian cancer, and uterine cancer worldwide from 1990 to 2019 were involved. Among the four women's cancers, the burden of female breast cancer was highest. In most regions especially developing countries, cervical cancer was the second most common women's cancer. At the same time, ovarian cancer and uterine cancer occurred less frequently (Alwan etal,2017) .

Breast cancer is the leading site for women, according to the latest Iraqi Cancer Registry, represented approximately a third of the registered women cancers in Iraq. In an attempt to reduce the death rate for breast

cancer, Iraq established national early cancer screening services, as suggested by the World Health Organization (WHO) (Hossain etal,2008; Russo etal,2008).

Results showed that the most common age group of incidence was that of above 50 years old, These results are explained by several known and suspected causes of an age-dependent susceptibility to cancer as, mutations increase with age, aging tissue and cellular microenvironment, a tumor suppressor and longevity assurance genes, lifetime carcinogenic exposure, decreased ability to repair DNA, oncogene activation, and amplification, decrease tumor suppressor gene activity, microenvironment alteration, including hormonal alterations or exposures and decreases immune surveillance due to immune senescence (Mahouri etal,2007).

The current study's findings revealed a significant link between low education levels and an increased incidence of breast cancer. Furthermore, education-related factors such as the stage of diagnosis, timeliness and type of cancer treatment, psychosocial support, and postmenopausal hormone therapy may have an impact on cancer survival (Schedin ,2006). However, our results indicated that neither hormone therapy nor contraception increases the risk of cancer. The most compelling reason for this is hormonal impregnation during the ovaries' operation cycle. This hypothesis is consistent with high estrogen levels after menstruation in women at a young age (Kasirajan etal,2006).

Our results showed that there was a statistically significant difference in breast cancer risk between smokers and not smoker’s patients. Fumes are thought to contribute to the development and growth of many cancers, including breast cancer. The contribution of nicotine to tumor growth and metastasis is accumulated through experimental evidence. Nicotine effect

may be mediated through nicotine acetylcholine-receptors expressed in human breast cancer cells, which regulate various pathways of signaling involving cell proliferation, angiogenesis, apoptosis as well as in primary tumor metastatic dissemination. Such results indicate that the prevalence and course of cancer of smoking may be affected. Smoking is related to an increased breast cancer incidence by the epidemiological findings (Gaudet, etal,2013; Shehnaz etal,2013).

Conclusion

In general, estimates of cancer disease costs vary widely across studies in the literature reviewed, making it difficult to draw conclusions or compare costs. Methodological heterogeneity among studies is most likely due to a lack of agreement in terms of cost estimation, data source availability, and presentation and selection is at the discretion of researchers. The most significant risk factors for breast cancer were studied in this study. According to the findings of the study, the most common patient group was those over the age of 50. Risk factors such as smoking, marital status, family history, age, education level, and state have a statistically significant relationship with, whereas there was a statistically non-significant relationship between cancer and hormonal use and marriage status. Better cancer risk factor identification and risk reduction may allow for the implementation of useful cancer prevention strategies.

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