

Incidence of breast cancer among Iraqi women.

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Abstract: *The incidence of breast cancer among Iraqi women is reviewed from 2004-2021 in different Iraqi provinces. The incidence rates are also illustrated in relation to age and year of registration. Incidence rate differs widely in relation to locality, age and race. Many factors have been considered as Iraq exposed to the Iraq-Iran war, gulf war and the usage of uranium weapon in the south part of Iraq. In addition, oil wheel fire in gulf war in south of Basrah, as well as the pollution caused by cars and generators for electricity production that expected to have an effect on the increased breast cancer rate in Iraq. Impaired physiological and immunological functions with advanced age might have an effect on the increased rate of cancer. In addition, risk factors are related to the female's age, parity, family history of breast cancer, especially first-degree relatives, radiation exposure, smoking, and the genetic factors of BRCA1 and BRCA 2 gene mutations. The frequency for breast cancer among middle-aged women is increasing. An incidence more than 50% has been reported in Baghdad, Middle Euphrates and Karbala. These observations indicate that breast cancer is increasing after 2012. Thus, a national control program is vital for diagnosis and treatment for this disease.*

Keywords: Breast cancer, Epidemiology, Iraq, Women.

INTRODUCTION

Breast cancer is the most widespread cancer among women worldwide (1). As for Iraq, breast cancer is one of the most common cancers among Iraqi women. It constitutes about 32% of the percentage of cancers that Iraqi women have suffered, as documented in the latest Iraqi Cancer Register (2). 70% of cases of breast cancer are diagnosed in the late stages of the disease. This reduces the probabilities of healing the infected and survival rates. As only (7%) of breast cancer cases were diagnosed in the early stages of the disease. Breast cancer has been reported in Arab World as in Egypt (42 patients per 100 000) (3), Saudia Arabia (12 cases per 100 000) (4,5), Lebanon (700 cases diagnosed per year) (6) and Jordan (49.1%) (7). In addition, reports have shown that the ratio of cases per 100,000 women in the Netherlands (91.6) (8), the United States (91.4) (9), France (83.4) (10) and Japan (31.4) (11).

Moreover, most of the studies carried out in various parts of Iraq addressed the histopathological, Immuno-histochemical, and hormonal features of breast cancer rather than the epidemiological and demographical characteristics. This is does not reflect the real size of the problem due to small size of cases included. The mammogram is an imaging technique used to understand the breast health, although it gives no definitive diagnosis of malignancy, but the radiologist can help by describing the findings for the surgeons that may help deciding about each patient (12).

Breast cancer risk factors are related to the female's age, parity, family history of breast cancer, especially first-degree relatives, radiation exposure, smoking, and the genetic factors of BRCA1 and BRCA 2 gene mutations (13). Awareness of the symptoms and early diagnosis are vital processes of reducing the risks related to breast cancer. The American Cancer Society has recommended for the prevention and early investigations of breast cancer, where women with moderate-to-high risks of developing breast cancer are advised to underwent regular screening mammography tests starting at the age of 45 years (14,15).

Therefore, the aim of this paper is to shed light on breast cancer in Iraq through reviewing the studies published by various centers in Iraq.

Results and discussion

The incidence rates of breast cancer are reviewed among women in different Iraqi provinces from 2004-2021. The incidence is varying from one region to another (Table 1).

The frequency for breast cancer among middle-aged women is increasing (Table 1). This finding was confirmed by the findings of other studies (14,15). An incidence more than 50% has been reported in Baghdad during 2018-2019 and 2004-2013 respectively (16,17), Middle Euphrates in 2016-2018 (18) and in Karbala during 2012-2020 (19). These observations indicate that breast cancer is increasing after 2012.

The most common risk factors of breast cancer are; nulliparity, using oral contraceptives, hormonal replacement therapy, low physical activity and family history (20). In addition, many studies in Sulaymaniyah (21), Baghdad (16), Basrah (22) and Karbala (19) show no difference in the incidence of breast cancer in rural and urban areas. Several factors have been reported such as exposure to light at long intervals at night, obesity, reduced physical activity and early age of menstruation. This may be explained by the fact that older women are exposed to internal estrogen for a longer period (23). The finding of present study confirmed that early menarche age was associated with an increased risk (2,18,19,21,23,24).

However, the cause is not explained till now but many factors have been considered as Iraq exposed to the Iraq-Iran war, gulf war and the usage of uranium weapon in the south part of Iraq. In addition, oil wheel fire in gulf war in south of Basrah, as well as the pollution caused by cars and generators for electricity production might have an effect on the increased breast cancer rate in Iraq (25).

Several studies have shown that obese women have higher fat tissue, estrogen levels are higher, which can increase the chances of rapid growth of breast cancers (26,27). The use of oral contraceptives increases the risk of breast cancer (28,29). It has been considered that the recommended process of breastfeeding prevents the development of breast cancer (30,31).

Among the studied group bilateral breast cancer was observed in 7.4% of patients exhibiting family history of the disease (2); higher than what was revealed in other studies (32,33).

Conclusion

Breast cancer is a wide-spreading public health problem in the world and including Iraq. The incidence of breast cancer increased in Iraq in recent years. The risk of breast cancer among Iraqi women was found to be distributed in many provinces with the greatest lifetime risk. Screening programs are considered essential and vital in the process of breast cancer control and prevention. Prevention programs need to be implemented and awareness campaigns organized in order to highlight the importance of early detection and treatment to improve survival.

Table 1. Incidence distribution of breast cancer in relation to provinces, years of registration and age.

Reference	Province	Year (s)	Age (s)	Incidence rate
Alwan (34)	Baghdad	2014-2016	>20->60	30.0
Fadil et al. (35)	Baghdad	2017-2018	<40	24.0
Al-Akeedi & Abd Noor (16)	Baghdad	2018-2019	41-60	89.0
Hassoon et al. (17)	Baghdad	2004-2013	40-60	58.9
Al-Mukhtar (23)	Mosul	9/2018-12/2018	40-49	44.7
Aldujaily et al. (18)	Middle Euphrates	2016-2018	20-91	57.0
Karim et al. (21)	Sulaymaniyah	2011-2013	20-82	536 cases.
Shwana et al. (36)	Sulaymaniyah	2012-2014	40-50	150 (100%) cases
Shakor (37)	Sulaymaniyah	2016-2021	-	42.2
Al-Sabbagh (38)	Karbala	2009-2017	>40	24.0

Mjali et al. (19)	Karbala	2012-2020	25-70	85.1
Al-Kafajy (39)	Thi-Qar	2009-2015	45-64	113 cases.
Abdulsamad et al. (22)	Basrah	2014-2020	>35	20.0

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