International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 10, 2020
ISSN: 1475-7192

Demographic and Clinicopathological characteristics of breast cancer patients, Baghdad, Iraq

[1]Venus M.Fadil, [2]Mohsin A. A. Sahib, [3]Najim Al Khaldy, [4]Farah L. R. Al-Rufaee, [5]Jawad K.Al-Diwan

Abstract:

Background:

Breast cancer is the most common cancer affecting women all over the world. Breast cancer is the most frequent cancer among women in Iraq.

Objectives: to highlight the main demographic characteristics and clinicopathological characteristics of female patients registered with breast cancer in Iraq.

Method: A retrospective study done on 264 diagnosed breast cancer cases during period of 2017 and 2018 among women records of attendees to women health center in AL-ELWYIA maternity teaching hospital.

Results: the mean age at presentation was 50.8 years ,patients under age of 40 years constitute 18.9% and those between 50-59 years constitute 29.5% ,about 69.7% of the patients had more than two children , 72% of patients were married and 14.8% of patients were nulliparous ,history of lactation was recorded in 75.8% of patients, family history of cancer was positive in 23.5% of patients , clinically the most common presenting symptom was breast lumps 68.9% of patients followed by skin changes 13.6% of patients, skin ulceration 1.1% of patients, bloody nipple discharge 6.8% of patients, bilateral breast involvement was encountered in 1.5% of patients,8.7% of patients had palpable axillary lymph nodes ,82.6% of patients had invasive ductal carcinoma followed by 12.9% of patients had lobular carcinoma and 81.8% of patients presented with grade II cancer.

Conclusion: a considerable proportion of breast cancer patients in Iraq still present with locally advanced disease at the time of diagnosis that justifies the necessity to promote public awareness educational campaigns to strengthen our national early detection program.

[1] Senior Resident, AL-Alwiyaa maternity teaching hospital, women health center/Iraq
[2] Professor, Dept.of histopathology, Ghazi Al-Hariri Hospital for Specialized Surgery/Iraq
[3] Senior Resident. Head of women health center, AL-Alwiyaa maternity teaching hospital/Iraq
[4] Senior Resident, Dept of pathology. AL-Yarmook Teaching Hospital/Iraq
[5] professor, Dept.of family and community Medicine, College of Medicine, University of Baghdad/Iraq

Received: 15 May 2020 | Revised: 5 Jun 2020| Accepted: 20 July 2020

Keywords: *demographic, clinicopathological, breast cancer, Iraq.*

I. Introduction:

Cancer is a major cause of mortality in the developing Eastern Mediterranean Region (EMR) where breast cancer constitutes the most registered female malignancy and the most common cause of cancer related deaths among women [1, 2].The World Health Organization reveals that the incidence rates of breast cancer are steadily increasing in countries of EMR including Iraq ,with annual rise ranging between 1% to 5% [3]it has been well documented that early detection of breast cancer when linked with adequate treatment could significantly reduce mortality irrespective of the biological nature of the tumor [2, 3]. Previous cross sectional studies in Iraq revealed a considerable lack of knowledge regarding the risk factors for breast cancer in Iraq even among the educated strata of the society [4].Based on that several studies have documented that Iraqi females often present with breast cancer at younger ages ,advanced stages ,and with more aggressive behavior than their western counterparts[5-7].As early detection of breast cancer has been recommended by the World Health Organization as one of the major tools to control the disease ,accordingly, a national program for early detection of breast cancer has been introduced in Iraq in 2010 with the establishment of specialized centers and clinics in all Iraqi governorates in attempt to down stage the disease at the time of presentation[8] .Early detection and screening, offer the most immediate hope for a reduction in breast cancer morbidity and mortality.Universally,there are three major techniques used for early detection of breast cancer: physical breast examination (PBE), Mammography with or without ultrasonography, and Fine Needle Aspiration Cytology(FNAC). It seems that much could be achieved by increasing the awareness of the population on breast cancer symptoms and signs, the good prognosis associated with treatment of early stage disease and by providing readily accessible and effective diagnostic and treatment services [9].

Objectives: the aim of this study was to high light the main demographic and clinical profiles of breast cancer among a series of Iraqi female patients who were registered with that disease at a main specialized center.

II. Patients and Methods:

A retrospective study done among women records of attendees to women health center in AL-ELwyia maternity teaching hospital. The required data obtained from the information system data base during a 2-years period starting from January 2017 and December 2018. 264 patients were enrolled in this study, patients proved to have breast cancer by histo-pathological study. The registered information comprised data related to demographic, clinical presentation and pathologic findings. The evaluated variables included age at diagnosis, marital status, age of menarche, number of parity, menopausal history, first degree family history of the breast cancer, clinical presentation and pathological features were also recorded. Statistical analysis was performed and different variables were analyzed.

III. Result:

A total of 264 breast cancer patients was enrolled in this study with mean age was 50.8(±11.9) years with 50(18.9%) were below 40 years, 68(25.7%) was between 40-49 years, 78(29.5%) was between 50-59 years, 48(18.2%) was between 60-69 years and 20(7.6%) was ≥70 years, figure -1-.

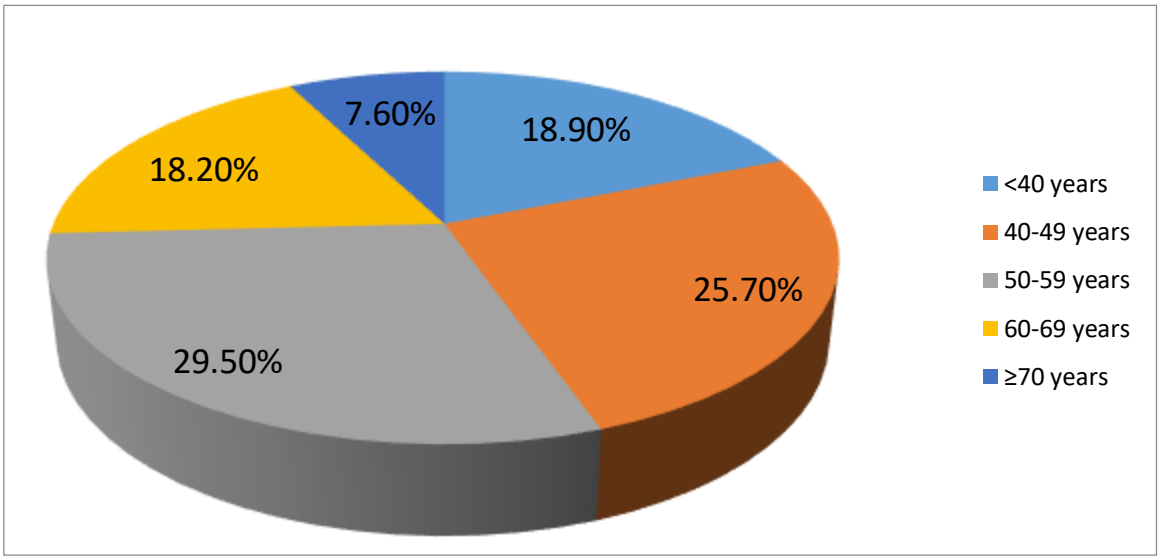

Figure -1- Age distribution among studied patients.

Gynecological and obstetrical history revealed that only 8.3%(22)of patients were a single, 14.8%(39) of patients had no child , 4.2%(11) of patients had menarche age ≥14 years, 58.7%(155) of patients were premenopause and 23.5%(62) of patients had positive family history, table-1-.

Table -1- Gynecological and obstetrical history among studied patients.

Variables		No (%)
Marital status	Married	190(72%)
	Divorced	32(12.1%)
	Single	22(8.3%)
	Widow	20(7.6%)
No of children	Nil	39(14.8%)
	One or two	41(15.5%)

Received: 15 May 2020 | Revised: 5 Jun 2020| Accepted: 20 July 2020

	Three or more	184(69.7%)
Age at menarche	≤11 years	81(30.7%)
	12 or 13 years	172(65.2%)
	≥14 years	11(4.2%)
Menopausal history	Premenopausal	155(58.7%)
	Postmenopausal	109(41.3%)
Family history	+ve	62(23.5%)
	-ve	202(76.5%)

The was in the upper outer quadrant (UOQ) in 75.4%(199) of patients, upper inner quadrant (UIQ) in 10.2(27) of patients, lower outer quadrant(LOQ) in 1.5%(4) of patients, lower inner quadrant(LIQ) in1.5%(4) of patients and reteroareolar in 9.1%(24) of patient and more than one site in 2.3%(6) of patients, right breast involvement was seen in 75%(198) of patients, table -2-.

Table -2- Site and laterality of cancer among studied patients.

Variables		NO(%)
Site of tumor	UOQ	199(75.4%)
	UIQ	27(10.2%)
	LOQ	4(1.5%)
	LIQ	4(1.5%)
	Retroareolar	24(9.1%)
	More	6(2.3%)
Laterality	Right breast	198(75%)
	Left breast	62(23.5%)

	Both	4(1.5%)

The initial clinical presentation of breast cancer patients shown that 68.2%(180) of patients had lump on breast, 35.2%(93) of patients had breast pain, 13.6%(36) of patients had skin changes, 1.1%(4) of patients had ulceration, 6.8%(18) of patients had bloody nipple discharge, 8.7%(23) of patients had palpable axillary lymph node and3.7%(10)of patients had sign and symptoms of distal metastasis, figure -2-

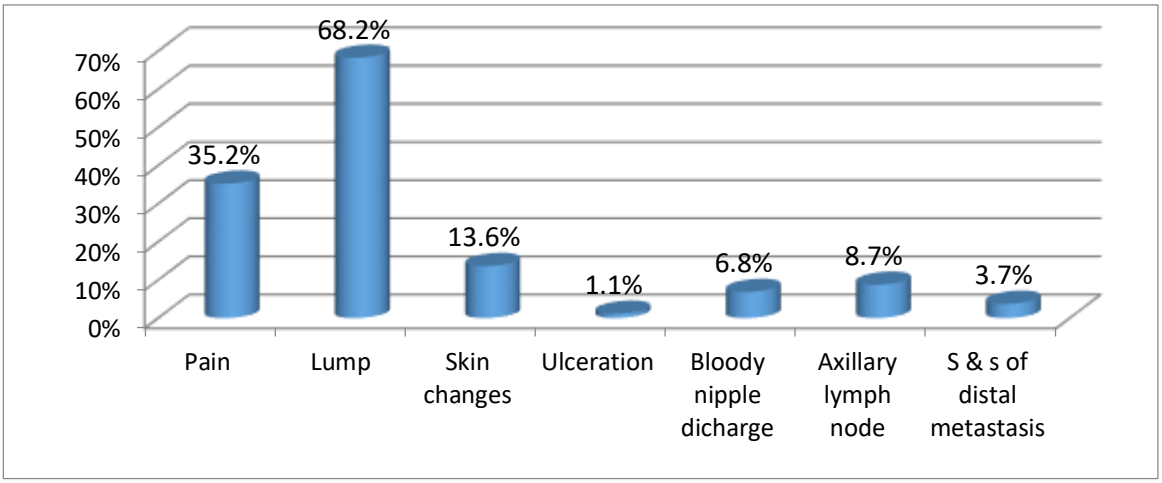

Figure -2- Clinical presentation of studied patients.

The histopathological type revealed that 82.6% (218) of patients had Invasive ductal type, 12.9% (34) of patients had Invasive lobular type and 4.5% (12) of patients had others cancer types. About cancer grade, 81.8% (216) of patients had grade II cancer, 16.3% (43) of patients had grade III cancer and only 1.9% (5) of patients had grade I, table -3-.

Table -3- The histopathological type among studied patients.

Variable		No (%).
Histopathology	Invasive ductal type	218(82.6%)
	Invasive lobular type	34(12.9%)
	Others	12(4.5%)
Grade	Grade I	5(1.9%)
	Grade II	216(81.8%)
	Grade III	43(16.3%)

IV. Discussion:

Breast cancer is the most common cancer in Iraq and the major cause of cancer related deaths among women[10], the westernization of the developing world has been claimed to be the main cause of the global rise in the prevalence of breast cancer[11].

Local studies from Iraq have demonstrated that the low survival of the affected patients is mainly attributable to the advanced stage at the time of presentation resulting from late diagnosis and management [6, 12]. The lack of knowledge, attitudes and practice towards breast cancer has been illustrated even among the educated sample of Iraqi population[4]. Urging prompt action to raise the level of awareness about the significance of early detection of breast cancer among the community and to extend the coverage to include rural and remote areas. This study show that the mean age at diagnosis was 50.8 years and 18.9% of patients were below 40 years, other Iraqi study shown that, 13.7(83) of women diagnosed with breast cancer were below 40 years[6], That was following the findings displayed in earlier studies from Iraq [13-15] which emphasises the high prevalence of that disease among the middle-aged female population, the overall the age standardized incidence rates for breast cancer among Arab women are significantly lower than that of western population[16] and this might be attributable to socioeconomic ,demographic and population factors. In this study, 72% were married and this corresponding to previous Iraqi study which show 75% was married[5]. only 4.2% of patients had age of menarche ≥14 years, As longer exposure to estrogen increases a woman's risk of breast cancers[17]. 58.7% of breast cancer was in premenopausal period in contrast to the western settings where only 23% of women presented with breast cancer in premenopausal peroid[18] this might reflect socioeconomic transition. This study illustrated that, 23.5% of patients had positive family history. First degree family history remained an important risk factor for breast cancer even among women older than 75 years [19].Previous Iraqi study revealed that positive family history of the first degree relative was 28.8% [20]. Clinically, the vast majority of Iraqi patients presented with palpable lump (68.2%), 35.2%(93) of patients had breast pain, 13.6%(36) of patients had skin changes, 6.8%(18) of patients had bloody nipple at the time of presentation in compare to previous Iraqi study which show that 95% of the presented symptoms were palpable lumps[20] Other Indian study revealed that 96% of patients diagnosed with breast cancer presented with palpable lump [21].and this may be due to increase orientation among Iraqi women regarding other breast symptoms. In this study the majority of patients had right breast cancer (75% of patients) and sited in the upper outer quadrant (75.4%) Tumor location is highest in the UOQ across multiple populations, including Chinese, Danish, the United Kingdom and women treated within the United States Department of Defence healthcare system[22-25]. This study showed that invasive ductal carcinoma was the most common type of breast cancer 82.6% followed by invasive lobular type 12.9%, previous Iraqi study show that also infiltrated ductal carcinoma was the most common pathology 67% followed by lobular carcinoma 13.6%[13]and it is also similar to study in Nigeria which show that invasive ductal carcinoma was the most common histological type 85.5%[26]. Also in this study only 1.9% had pathological changes of grade I this similar to previous study which shown only 3.5 % of patients had grade I cancer[5].

Received: 15 May 2020 | Revised: 5 Jun 2020| Accepted: 20 July 2020

V. Conclusion :

This study provides a detailed description of the symptoms signature at presentation among a women subsequently diagnosed with breast cancer, a considerable proportion of breast cancer patients in Iraq is still present with locally advanced disease at the time of diagnosis , that justifies the necessity to promote public awareness educational campaigns to strengthen national early detection program and also there is need to improve public enlightenment of breast cancer and set up screening centers to encourage early presentation.

Ethical clearance: taken from the Arabic Board of Health Specialization.

Source of funding: Self-funded.

Conflict of interest: no conflict of interest.

References:

1. Ferlay J, Colombet M, Soerjomataram I, Mathers C, Parkin D, Piñeros M, et al. Estimating the global cancer incidence and mortality in 2018: GLOBOCAN sources and methods. International journal of cancer. 2019;144(8):1941-53.
2. Organization WH. Strategy for cancer prevention and control in the Eastern Mediterranean Region 2009-2013. 2010.
3. Kulhánová I, Bray F, Fadhil I, Al-Zahrani AS, El-Basmy A, Anwar WA, et al. Profile of cancer in the Eastern Mediterranean region: The need for action. Cancer epidemiology. 2017;47:125-32.
4. Alwan N, Al Attar W, Eliessa R, Madfaic Z, Tawfeeq F. Knowledge, attitude and practice regarding breast cancer and breast self-examination among a sample of the educated population in Iraq. 2012.
5. Alwan N. Breast cancer: demographic characteristics and clinico-pathological presentation of patients in Iraq. 2010.
6. Alwan N, Tawfeeq F, Maallah M, Sattar S, Saleh W. The Stage of Breast Cancer at the Time of Diagnosis: Correlation with the Cinicopathological Findings among Iraqi Patients. Journal of Neoplasm. 2017;2(3):22.
7. Alwan N, Mualla F, Al MN, Kathum S, Tawfiq F, Nadhir S. Clinical and Pathological Characteristics of Triple Positive Breast Cancer among Iraqi Patients. The Gulf journal of oncology. 2017;1(25):51-60.
8. Alwan N. Iraqi initiative of a regional comparative breast cancer research project in the Middle East. J Cancer Biol Res. 2014;2(1):1016.
9. Vainio H, Bianchini F. IARC handbook of cancer prevention. vol 7: breast cancer screening. IARCPress: Lyon, France; 2002.

10. Ferlay J, Shin H, Bray F, Forman D, Mathers C, Parkin D. Cancer incidence and mortality worldwide, international agency for research on cancer. Cancer incidence and mortality worldwide, International agency for research on cancer. 2013:120-63.
11. Porter P. ``Westernizing"Women's Risks? Breast Cancer in Lower-Income Countries. New England Journal of Medicine. 2008;358(3):213.
12. Alwan N, Kerr D. Cancer control in war-torn Iraq. The Lancet Oncology. 2018;19(3):291-2.
13. Alwan NA. Breast cancer among Iraqi women: Preliminary findings from a regional comparative Breast Cancer Research Project. Journal of global oncology. 2016;2(5):255.
14. Alwan N, Tawfeeq F, Maallah M. The Stage of Breast Cancer at the Time of Diagnosis: Correlation with the Clinicopathological Findings among Iraqi Patients. J Neoplasm. 2017; 2 (3): 22.
15. Al Alwan NA. Establishing national guidelines for early detection of breast cancer in Iraq: Clinical Implications and Perspectives. International Journal. 2015;3(12):539-55.
16. Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre L, Jemal A. GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. Ca Cancer J Clin. 2018;68(6):394-424.
17. Cooper K. Springhouse: Springhouse Corp; 1998. Pathophysiology Made Incredibly Easy.
18. Edge SB, Byrd DR, Carducci MA, Compton CC, Fritz A, Greene F. AJCC cancer staging manual: Springer New York; 2010.
19. Braithwaite D, Miglioretti DL, Zhu W, Demb J, Trentham-Dietz A, Sprague B, et al. Family history and breast Cancer risk among older women in the breast Cancer surveillance consortium cohort. JAMA internal medicine. 2018;178(4):494-501.
20. Alwan NA, Tawfeeq FN, Mallah NA. Demographic and clinical profiles of female patients diagnosed with breast cancer in Iraq. Journal of Contemporary Medical Sciences. 2019;5(1):14-9.
21. Velappan A, Shumugam D. Analysis of demographic characteristics and treatment outcome of breast cancer patients in a tertiary cancer centre. IOSR J Dent Med Sci. 2017;16:25-8.
22. Kroman N, Wohlfahrt J, Mouridsen HT, Melbye M. Influence of tumor location on breast cancer prognosis. International journal of cancer. 2003;105(4):542-5.
23. Sohn VY, Arthurs ZM, Sebesta JA, Brown TA. Primary tumor location impacts breast cancer survival. The American journal of surgery. 2008;195(5):641-4.
24. Wu S, Zhou J, Ren Y, Sun J, Li F, Lin Q, et al. Tumor location is a prognostic factor for survival of Chinese women with T1-2N0M0 breast cancer. International Journal of Surgery. 2014;12(5):394-8.
25. Darbre PD. Recorded quadrant incidence of female breast cancer in Great Britain suggests a disproportionate increase in the upper outer quadrant of the breast. Anticancer research. 2005;25(3C):2543-50.

26. Kene TS, Odigie VI, Yusufu LM, Yusuf BO, Shehu SM, Kase JT. Pattern of presentation and survival of breast cancer in a teaching hospital in north Western Nigeria. Oman medical journal. 2010;25(2):104.