Role of Triple Assessment in Detection of Breast Cancer in Baquba Teaching Hospital
Noor Hazim Taih (BSC)¹, Nadhim Ghazal Noaman (PhD)², Moneam Akram Hassan (FIBMS)³ and Mohamad Theyab Hamad Hussein (MRCS,FRCS)⁴

Abstract

Background: Breast cancer is the most commonly identified dangerous cancer in females. While breast cancer has been recorded to be a source of female mortality in many developing countries, studies have shown that bronchogenic carcinoma exceeds breast cancer as the most common reason of female mortality.

Objective: This study aims at evaluating the role of (clinical examination, radiological finding and histopathological finding) in detection of breast cancer in Baquba Teaching Hospital.

Patients and Methods: This cross-sectional study recruited ambulatory patients at outpatient breast clinic unit in a Baquba Teaching Hospital from 1st of January to 31th of May 2019.

Results: This study showed that while 39 (93%) of breast cancer patients had a positive finding on clinical examination, only 3 (7%) had a negative finding. On the other hand our data showed that 35 (83%) of breast cancer patients had positive radiological findings and only 7 (17%) of breast cancer patients had negative radiological findings. 42 (100%) of breast cancer patients have shown positive histopathological findings.

Conclusion: Triple assessment is a very useful diagnostic tool to evaluate patients with breast lumps and detect patients with breast cancer.

Keywords: Breast Cancer, Baquba Teaching Hospital

Corresponding Author: noorhazim249@gmail.com

Received: 19th January 2020
Accepted: 12th March 2020
DOI:https://doi.org/10.26505/DJM.19015190119

Introduction

Breast cancer is steadily increasing as the most widespread malignancy among women in the developed and developing regions around the world [1]. Ranking the first among the Iraqi population since three decades and the second killer following cerebrovascular diseases, breast cancer has caused a major public health problem among women [2,3]. Regrettably many Iraqi patients still present at advanced stages at the time of diagnosis [4]. In the absence of specific primary prevention strategies for reducing breast cancer incidence, early detection and prompt treatment remain the major control
Role of Triple Assessment in Detection of Breast Cancer in Baquba Teaching Hospital

Noor Hazim Taih

options to improve survival and quality of life of the affected patients in low and middle income countries including Iraq [5].

The incidence rates vary considerably, with the highest rates in the developed world and the lowest rates in Africa and Asia, It has been proposed that the reason behind that is the outcome of multiple environmental and hereditary factors [6,7]. The survival rate is one of the best vital procedures of cancer maintenance, and is a respectable implement for comparison among states [8,9]. World Health Organization (WHO) described a main rise in cancer mortality in subsequent years is possibly in the (EMR) [1,10]. Aim of the study To evaluate the role of (Clinical examination, radiological finding and histopathological finding) in detection of breast cancer.

Patients and Methods

This is a cross-sectional study that has recruited ambulatory patients at outpatient breast clinic unit in Baquba Teaching Hospital from 1st of January to 31th of May 2019. This study included 309 patients. A special questionnaire was used to collect data from patients. That questionnaire included the following parameters age, marital state, breast feeding history, contraceptive pill history and family history of breast cancer (appendix). Each patient was first examined by a specialist surgeon by the inspection of any asymmetry, local swelling, skin changes, nipple changes then by palpation for any lump or swelling (size, position, attachments, consistency, edge, surface and shape). Axilla was also examined for any lymph node enlargement. All patients were sent to either breast ultrasound or mammography to detect any breast abnormality, According to the radiological finding seen on ultrasoundography and mammography some patients were sent to histopathology according to surgeon decision if there is any suspicious of malignancy. Breast cancer patients were classified by surgeons into different stages according to the histopathological findings.

Statistical analysis

Data of all patients were entered and analyzed using Microsoft Excel 2010 software for window 7. Descriptive statistics were presented as mean ± standard deviation (SD) for continuous variables and as frequencies and proportions (%) for categorical variables.

Results

There are 309 patients who have enrolled in this study, 42 (14 %) patients were diagnosed with breast cancer and 267 (86 %) were diagnosed with other breast abnormality. Table (1) Distribution of Breast Cancer patients according to their age in the studied group. In our study; the patients were classified into six groups based on their ages. Our data showed that 1 (2%) of breast cancer patients classified to be in the first age group (21-30 years), 7 (17%) of them to the second group (31-40 years), 13 (31%) to the third group (41-50 years), 10 (24%) to the forth group (51-60 years), 9 (21%) to the fifth group (61-70 years) and 2 (5%) belong to the sixth group (71-80 years).
Table (2) Distribution of breast cancer according to the family history of breast cancer. Regarding family history of breast cancer; while only 3 patients (7%) had a positive family history 39 patients (93%) had a negative history.

Table (3) Distribution of breast cancer according to the history of breast feeding. In our study, 29 (69%) of breast cancer patients showed a positive history of breastfeeding and only 13 (31%) of them had a negative history.

Table (4) Distribution of breast cancer according to the history of oral contraceptive pills. While 12 patients (29%) had a history of oral contraceptive pill, 30 patients (71%) did not have.

Table (5) Distribution of breast cancer according to the marital state. In our study, 34 (81%) of breast cancer patients were married, 4 (9.5%) were widow and 4 (9.5%) were single.

Table (6) Distribution of breast cancer according to the cancer stages. Most cases belonged to the differentiation stage II (19/42, 45%), followed by stage III (11/42, 26%), stage I (7/42, 17%) and stage IV (5/42, 12%).

Table (7) Distribution of breast cancer patients according to the finding of triple assessment. In this study; 39 (93%) of breast cancer patients had a positive finding on the clinical examination and only 3 (7%) had a negative finding. While 35 (83%) of breast cancer patients had a positive radiological findings, 7 (17 %) had a negative radiological findings. Finally, 42 (100%) of breast cancer patients had a positive histopathological findings. P value was significant ( 0.018).

Table (1): Distribution of Breast Cancer patients according to their ages in the studied groups

| Variables (years) | No. of breast cancer patients | Percentage of breast cancer patients |
|-------------------|-----------------------------|-------------------------------------|
| 21 – 30           | 1                           | 2 %                                 |
| 31 – 40           | 7                           | 17 %                                |
| 41 – 50           | 13                          | 31 %                                |
| 51 – 60           | 10                          | 24 %                                |
| 61 – 70           | 9                           | 21 %                                |
| 71 – 80           | 2                           | 5 %                                 |
| Total             | 42                          | 100 %                               |

Table (2): Distribution of breast cancer according to the family history of breast cancer

| Variable             | No. of patients | Percentage of patients |
|----------------------|-----------------|------------------------|
| Positive family Hx.  | 3               | 7%                     |
| Negative family Hx.  | 39              | 93%                    |
| Total                | 42              | 100%                   |
Role of Triple Assessment in Detection of Breast Cancer in Baquba Teaching Hospital

Table (3): Distribution of breast cancer according to the history of breast feeding

| Variable     | No. of patients | Percentage of patients |
|--------------|----------------|-----------------------|
| Positive Hx. | 29             | 69 %                  |
| Negative Hx. | 13             | 31 %                  |
| Total        | 42             | 100%                  |

Table (4): Distribution of breast cancer according to the history of oral contraceptive pills

| Variable     | No. of patients | Percentage of patients |
|--------------|----------------|-----------------------|
| Positive Hx. | 12             | 29 %                  |
| Negative Hx. | 30             | 71 %                  |
| Total        | 42             | 100%                  |

Table (5): Distribution of breast cancer according to the marital state

| Variable  | No. of patients | Percentage of patients |
|-----------|----------------|-----------------------|
| Married   | 34             | 81 %                  |
| Widow     | 4              | 9.5 %                 |
| Single    | 4              | 9.5 %                 |
| Total     | 42             | 100%                  |

Table (6): Distribution of breast cancer according to the cancer stages

| Variable | No. of patients | Percentage of patients |
|----------|----------------|-----------------------|
| Stage 1  | 7              | 17 %                  |
| Stage 2  | 19             | 45 %                  |
| Stage 3  | 11             | 26 %                  |
| Stage 4  | 5              | 12 %                  |
| Total    | 42             | 100%                  |

Table (7): Distribution of breast cancer patients according to the finding of triple assessment

| Categories                | positive cases | negative cases | Total | P Value |
|---------------------------|----------------|----------------|-------|---------|
|                           | N   | %   | N   | %   |       |
| Clinical finding          | 39  | 93% | 3   | 7%  | 42    | 0.018 |
| Radiological finding      | 35  | 83% | 7   | 17% | 42    |       |
| Histopathological finding | 42  | 100%| 0   | 0%  | 42    |       |

Discussion

Having a positive family history of breast cancer is a risk factor for breast cancer. Familial breast cancer counts 20–30% of all breast cancer cases [11, 12]. In our study, only 7% of patients had first- or second-degree family member(s) with breast cancer. History of lactation was demonstrated in 69% of total patients. This might be attributed to a better awareness of the protective effect of lactation among the women. A previous study [13], showed a frequency of 69.8% (similar to our results) of
Role of Triple Assessment in Detection of Breast Cancer in Baquba Teaching Hospital

Noor Hazim Taih

breast cancer patients who were lactating during their life. While Al-Anbari study reported lower frequency (48.83%) [14] while Hasoon study recorded that 80% of the breast cancer patients had a history of lactation [15]. Our results showed that; 71% of patients had no history of oral contraceptive pills use and 29% had used those pills. An earlier study from Iraq showed that only 18% of patients had a history of oral contraceptive pill [15]. Another study showed that 20% of Bahrainian patients had a history of oral contraceptive pills consumption [16, 17]. Majority of the patients belonged to stage II (45%), followed by stage III (26%). Such percent was also reported previously from studies that have done in some Arabic regions [18]. However, the trend in Western countries, is reversed: maximum number of cases belong to stage I, followed by stage II, III and IV [19]. The study showed that (93%) of breast cancer patients had a positive finding on clinical examination and (83%) had positive radiological findings which disagrees with the other study in china where (88%) of breast cancer patients had a positive finding on clinical examination and (94%) of patients had positive radiological finding [20]. Another study in south India showed that (95%) of patients had a positive finding on clinical examination and (98%) had a positive radiological finding [21]. Another study in Kashmir mentioned that (93%) of patients had a positive clinical finding and (100%) of patients had positive radiological findings [22].

Conclusions

To conclude, our data showed that the triple assessment is a very useful diagnostic tool to get a good evaluation for the patients with breast lumps and to detect patients with breast cancer as well.

Recommendations

Regular mammography combined with regular clinical examination may offer the best opportunity of increasing the proportion of early stage detection of breast cancer.

References

[1] Globocan (2012) : International Agency for Research on Cancer, Lyon, IARC Press, 2013.
[2] Iraqi Cancer Board .(2017) Results of the Iraqi Cancer Registry . Baghdad, Iraqi Cancer Registry Center, Ministry of Health.
[3] Alwan NAS , (2016) : Breast Cancer among Iraqi women: Preliminary Findings from a Regional Comparative Breast Cancer Research Project. Journal of Global Oncology, ASCO ; 2 (1): 1-4.
[4] Von Karsa L, Qiao Y, Ramadas K, Keita N, Arrossi S, Boyle P, Alwan N and Sankararanaranayanan R , (2014) : Prevention/Screening Implementation, in Stewart BW and Wild CP (eds): World Cancer Report . Lyon, France, World Health Organization International Agency for Research on Cancer .
[5] Alwan N , (2013) : Medical Guidelines for Iraqi Women on the Techniques of Early Detection of Breast Cancer. Iraqi National Cancer Research Center / Baghdad University in collaboration with the
Role of Triple Assessment in Detection of Breast Cancer in Baquba Teaching Hospital

Noor Hazim Taih

Department of Research and Development, MoHESR,
[6] Parkin D. M., Whelan S. L., Ferlay J., Teppo L. (2002): Cancer Incidence in Five Continents, Vol. VIII. Lyon, France: IARC Scientific Publications.
[7] Dickman PW, Hakulinen T (2000) : Population-based cancer survival analysis (statistics in practice series). New Jersey, John Wiley.
[8] Coleman, Michel P, (2008) : “Cancer survival in five continents: a worldwide population-based study (CONCORD).” The lancet oncology, Vol. 9, No. 8, pp. 730-56.
[9] Sankaranarayanan, Rengaswamy, Nada Alwan, and Lynette Denny, (2013) : “How can we improve survival from breast cancer in developing countries?” Breast Cancer Management, Vol. 2, No. 3, pp. 179-83.
[10] World Health Organization , (1995) : “Cancer control in the Eastern Mediterranean Region.” Cancer control in the Eastern Mediterranean Region, Vol. 20.
[11] M. E. Akbari and G. Mohammadi, (2014) : Womens Cancers of Iran, Mohsen Publications, Tehran, (Farsi).
[12] R. Largillier, J. M. Ferrero, J. Doyen, and et al. (2019) : “Prognostic factors in 1,038 women with metastatic breast cancer,” Ann Oncol, vol. 19, no. 12, pp. 2012–2019, 2008.
[13] Ameen A. (2009) : Breast cancer in Iraqi female patients a clinicopathological and immunohistochemical study, a thesis submitted to Iraqi Board of Medical specialties in partial fulfillment of the requirement for the degree of fellowship of the Iraqi Board of Medical Specialization in Pathology, supervised by Prof. N Alwan.
[14] Al-Anbari S. (2009). Correlation of the clinicopathological presentations in Iraqi breast cancer patients with the findings of biofield breast cancer diagnostic system (BDS), HER-2 and Ki-67 immunohistochemical expression, a thesis submitted to the college of medicine and the committee of post graduate studies of the University of Baghdad in partial fulfillment of the requirement for the degree of Ph. D. in Pathology, supervised by Prof. N Alwan.
[15] Hasoon S. (2007) : Correlation of the findings of biofield breast cancer diagnostic system (BDS) with clinicopathological parameters of mammary carcinoma in Iraq, a thesis submitted to Iraqi Board of Medical specialties in partial fulfillment of the requirement for the degree of fellowship of the Iraqi Board of Medical Specialization in Pathology, supervised by Prof. N Alwan.
[16] Al-Saad S., Al-Shinnawi H., Shamsi N. (2009) : Risk factors of breast cancer in Bahrain. Bahrain Med Bull, ; 31(2):1-11.
[17] A. A. Aizer, M.H. Chen, and E. P. McCarthy, (2013) “Marital status and survival in patients with cancer,” Journal of the American Society of Clinical Oncology, vol. 31, no. 31, pp. 3869–3876.
[18] Ezzat AA, Ibrahim EM, Raja MA, et al (1999) : Locally advanced breast cancer in Saudi Arabia: high frequency of stage III in a young population. Med Oncol, 16, 95-103.
[19] Orucevic A, Chen J, McLoughlin JM, et al (2015) : Is the TNM staging system for breast cancer still relevant in the era of biomarkers and emerging personalized
Role of Triple Assessment in Detection of Breast Cancer in Baquba Teaching Hospital

Noor Hazim Taih

medicine for breast cancer - an institution’s 10-year experience. Breast J, 21, 147-54.
[20] Yang WT, Mok CO, King W, Tang, Metreweli C (1996) Role of high frequency ultrasonography in the evaluation of palpable breast masses in Chinese women: Alternative to mammography. J Ultrasound Med 15(9):637–644.
[21] Martelli G, Pilotti S, Coopmans de Yoldi G, Viganotti G, Fariselli G, Lepera P, Moglia D (2012) Diagnostic efficacy of physical examination, mammography, fine needle aspiration cytology (Triple test) in solid breast lumps: An analysis of 1708 consecutive cases. Tumouri 76(5):476–479.
[22] Masooda Jan Javeed Ahmad Mattoo, Nazir Ahmad Salroo Shahnawaz Ahangar (2009) Triple assessment in the diagnosis of breast cancer in Kashmir Indian J Surg (March–April 2010) 72:97–103.