Follow-up and Treatment Options for Breast Cancer Patients in Iraq

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Abstract:

The purpose of this research was to Follow-up and Treatment Options for Breast Cancer Patients in Iraq. The purpose of this retrospective research was to examine the demographic, clinical, and tumour pathological data of 210 female Iraqi patients with a histological diagnosis of breast cancer. Patients' ages, marital statuses, parities, first delivery ages, occupations, breastfeeding histories, hormone intake, family cancer and breast cancer histories, tumour grades, clinical stages, histological types, and tumour grades were among the variables examined. Immunohistochemistry was used to examine the hormone receptor (ER) and HER2 overexpression content of the main tumours. Surgery, radiation, chemotherapy, hormone replacement, and biological targeted therapy were all part of the therapeutic choices that were on the table. Three years of follow-up allowed us to assess the recurrence rate. out of the total number of breast cancer cases in this research, 8.1% (17 cases) were diagnosed at stage I, 45.7% (96 cases) were diagnosed at stage II, 39.5% (83 cases) at stage III, and 6.7% (14 cases) at stage IV. Two subcategories, IIA and IIB, were used to classify Stage II: 30.0% and 15.7% of the total, respectively. In contrast, stage III was further subdivided into IIIA, IIIB, and IIIC, accounting for 26.2%, 3.8%, and 9.5% of the overall portion, respectively. The evaluating surgeons and oncologists provided treatment choices based on each patient's specific situation. There were 201 patients (95.7% of the total) who had surgery. Chemotherapy was administered to 101 patients (91.0%), whereas 134 cases (63.8%) were scheduled for radiation treatments. Among the patients who were provided hormone therapy as an adjuvant treatment option, 129 patients (61.4%) with ER and/or PR positive tumour contents were given Tamoxifen and Aromatase inhibitors. On the other hand, 58 patients (26.6%) with HER2 positive findings were given Herceptin.

In conclusion, when patients first appear with breast cancer in Iraq, the disease is often well advanced, necessitating severe mastectomies and other forms of palliative care. The future of breast cancer management hinges on early diagnosis. To track the effectiveness of treatment and prevent recurrence, patients must undergo multimodality treatment and undergo long-term, routine follow-up with the help of multidisciplinary tumour boards.

Key words:

Breast, cancer, Iraq, Surgery.

Introduction:

Despite the fact that breast cancer is the most common cancer in women globally, it is particularly common in Iraq, where it is also the top cause of cancer-related death in women. Several

studies have shown that, even now, a significant number of female patients in Iraq still have breast cancer at younger ages, with more advanced stages and aggressive tumour biological profiles than in the West [1- 9], which leads to a poor prognosis.

There is a great deal of genetic, histological, and etiological diversity in breast cancer, according to reports [10]. In underdeveloped nations, the mortality rate from breast cancer may be drastically reduced if the illness could be detected early and treated well, according to the World Health Organisation [11]. Initiated in 2001[3–5], [8], [12], Iraq has a nationwide programme for early identification of breast cancer. Aside from the obstacles that have already been extensively shown in previous research [13–19], the project is also confronted with the lack of evidence-based protocol guidelines linked to the limited ability to provide effective multimodality treatment[13-20].

In low- and middle-income nations, the problem of insufficient and poorly accessible health services, which causes enormous out-of-pocket healthcare costs, is a major factor in the low illness survival rate [21], [22]. Breast cancer patients should have easier access to multimodality treatment options that include adjuvant hormone, radiation, chemotherapy, and surgery. Several criteria, such as the breast cancer's pathological abnormalities, the patient's demographics and clinical characteristics, and the likelihood of recurrence, influence the therapy option. The latter requires consistent monitoring in order to quickly identify any loco-regional recurrence. Treatment options for breast cancer care and patient follow-up have received little attention in developing-world literature [22– 25].

The purpose of this research was to Follow-up and Treatment Options for Breast Cancer Patients in Iraq.

MATERIALS AND METHODS:

The clinical and pathological features of 210 breast cancer patients from Iraq were examined in this retrospective analysis.

All female patients with invasive breast cancer verified by histopathology and with valid, reliable, and three-year follow-up data on demographics, clinical status, and pathology were included in the study. We did not include cases where any information was lacking or when the in situ cancer was not invasive. In compliance with the ethical standards outlined in the Declaration of Helsinki, all patients who participated in this study signed a written consent form that authorised the use of their personal information for research purposes.

Patient age at diagnosis, marital status, parity, age at first delivery, occupation, history of lactation and hormonal intake (for a minimum of 6 months), family history of breast or any other cancer, tumour grade (following modified Nottingham Bloom Richardson) [26,27], and clinical stage at presentation (defined according to the UICC TNM Classification System [28]) were all demographic, clinical, and pathological parameters collected. With the use of Immunohistochemical (IHC) staining of the formalin fixed paraffin-embedded tissue blocks containing the breast cancer specimens, we were able to evaluate the overexpression contents of oestrogen and progesterone receptors (ER, PR) as well as HER2 using (Dako) kits and specific monoclonal antibodies.

Treatment modalities such as hormonal, biological, radiation, chemotherapy, and surgery were all part of the treatment menu. The rate of recurrence after three years of follow-up was assessed by analysing the patient's medical history, physical examination, imaging studies, and laboratory results. The correlation with the clinical stages of breast cancer at initial presentation was also recorded.

Statistical analysis was done by using SPSS version 23.

Results

Table 1 shows that out of the total number of breast cancer cases in this research, 8.1% (17 cases) were diagnosed at stage I, 45.7% (96 cases) were diagnosed at stage II, 39.5% (83 cases) at stage III, and 6.7% (14 cases) at stage IV. Two subcategories, IIA and IIB, were used to classify

Stage II: 30.0% and 15.7% of the total, respectively. In contrast, stage III was further subdivided into IIIA, IIIB, and IIIC, accounting for 26.2%, 3.8%, and 9.5% of the overall portion, respectively.

Table 1: Breast Cancer Clinical Stages at the Time of Diagnosis

Stage	N (n=210)		(%)		Total N (%)
I	17		8.3		**17 (8.1)**
II	IIA	63	30		**96 (45.7)**
	IIB	33	15.7		
III	IIIA	55	26.2		**83 (39.5)**
	IIIB	8	3.8		
	IIIC	**20**		**9.5**	
IV		14	6.7		**14 (6.7)**
Total		**210**	**100**		**210 (100)**

The evaluating surgeons and oncologists provided treatment choices based on each patient's specific situation (Table 2). There were 201 patients (95.7% of the total) who had surgery. Chemotherapy was administered to 101 patients (91.0%), whereas 134 cases (63.8%) were scheduled for radiation treatments. Among the patients who were provided hormone therapy as an adjuvant treatment option, 129 patients (61.4%) with ER and/or PR positive tumour contents were given Tamoxifen and Aromatase inhibitors. On the other hand, 58 patients (26.6%) with HER2 positive findings were given Herceptin.

Table 2. Breast Cancer Management Treatment Options

Treatment Modality	N	%
Surgery*	201	**95.7**
Chemotherapy	191	**91.0**
Radiotherapy	134	**63.8**
Hormonal	129	**61.4**
Biological	**58**	**27.6**

Discussion:

The most common kind of cancer in women worldwide is breast cancer, which is a malignant tumour. One out of every four new instances of cancer was breast cancer in 2015, with 1.5 million cases registered. This accounted for 25% of all cancer diagnoses among women and caused about 570,000 deaths globally [29].

Developing nations have high breast cancer mortality rates due to a combination of factors, including a lack of access to affordable, high-quality multimodality treatment options and the social stigma and ramifications of mastectomy, which prevent women from seeking medical attention

quickly [22], [24]. The vast majority of patients in this research were recommended surgery as their main treatment option (96%). A critical evaluation of mastectomy practice found that, despite its demotion from first-line treatment status for all breast malignancies, it is still the primary surgery used in care [30]. Regrettably, most patients in Iraq and other developing Arab countries are detected at late stages, and established radiotherapy centres do not have the capacity for sophisticated conservative approaches, so modified radical mastectomy is the standard surgery [31-33]. Results from developed-world research show far greater rates of breast-conserving surgery [34]. Despite the fact that many patients chose mastectomies because to recurrence fears, there was no statistically significant difference in survival rates between patients who had mastectomy and those who had breast conservative surgery in the context of conventional radiotherapy facilities.[35]

In this research, 65.7% of patients were administered postoperative radiation for free in units that were well-equipped, as aggressive breast carcinomas need it. However, 8.8% of participants stopped taking their medication throughout the course of the trial. After starting breast cancer treatment, many patients stop due to the unpleasant side effects, lengthy waiting lists, or psychological issues, rather than financial concerns. [36, 37]. A literature review on breast cancer management trends revealed that only a small number of Arab countries have access to modern radiation therapy, leading researchers to call for more funding and training to help fill this gap and make innovative treatment methods a reality.[38]

The benefits of the free treatment services provided in all public hospitals throughout the nation are clearly responsible for the high incidence of patients who underwent systemic chemotherapy in this research (91.7%). Patients were continuously evaluated using blood chemical profiles and complete blood count tests, and treatment with anthracycline-based chemotherapy was started because around half of the cases in this research were detected in advanced stages. Neoadjuvant hormone treatment was administered to nine individuals who were not eligible for chemotherapy for medical reasons; 63.5% of patients with hormone receptor positive tumours received Tamoxifen and/or Aromatase inhibitors as an effective adjuvant endocrine therapy. Targeted biological treatment (Herceptin) was made available to 27% of the patients at no cost because of the relatively high prevalence of HER2 positive breast cancer manifestations among Iraqi patients found in this research and others [39, 30,33]. The worldwide guidelines for breast health for multidisciplinary integrated methods to managing breast cancer in areas with low resources were almost identical to these treatment regimens [40].

Finally, when patients first appear with breast cancer in Iraq, the disease is often well advanced, necessitating severe mastectomies and other forms of palliative care. The future of breast cancer management hinges on early diagnosis. To track the effectiveness of treatment and prevent recurrence, patients must undergo multimodality treatment and undergo long-term, routine follow-up with the help of multidisciplinary tumour boards.

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