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ORIGINAL ARTICLE

Is Breast Conserving Surgery A Suitable Approach for Early Breast Carcinoma? A Multicenter Study

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ABSTRACT

Currently, there has been a tendency to prefer breast-conserving surgery (BCS) over mastectomy (MC). Therefore, this study came to assess whether this is true when compared with mastectomy. This retrospective study included early breast cancer patients who were registered in government and private hospitals in Kirkuk and Diyala governorates during the period from February 2015 to March 2017, and were followed up after surgery for five years. The enrolled patients (women) were set into (2) groups; the first one was for patients treated with BCS, while the second was for patients who underwent MC. As a preliminary result, it was found that out of the total of (172) participants, (72) were in the BCS, and (100) in the MC. Convergence of age groups was observed between patients in both surgical groups. The results proved that the local recurrence rate amounted to about (9%) in patients undergoing BCS and the survival rate was for the same group (97%). Thus, we concluded that the breast preservation approach is an appropriate and successful choice for early breast carcinoma patients.

Keywords: carcinoma, conserving surgery, local recurrence.

INTRODUCTION

Breast cancer has been considered the majority frequently confirmed cancer and one of the prime causes of cancer mortality for women globally. In some countries, it accounts for 1 in 4 types of diagnosed cancers and up to 20% of cancer deaths in women [1-3]. It is worth noting that breast cancer mortality rates are higher in developing countries, and this may be due to poverty, illiteracy, lack of health insurance, as well as late diagnosis [4,5]. However, it has been observed that the incidence and severity of this type of this cancer continues to increase despite the advances in modern treatment strategies, which foreshadows the urgent need to find new methods to improve the good progress and treatment [6,7]. It has been established that long-term survival rates were equivalent between surgical intervention with both mastectomy (MC) and breast-conserving surgery (BCS) for early stage cases of breast carcinoma [8,9].

In the late 20th century, the BCS approach plus radiation therapy was recommended as an appropriate first-line alternative to MC for the greater number of women with breast carcinoma, especially those who are not contraindicated with breast preservation [10,11]. However, in recent years, mastectomy rates have increased and this may be due to conditions related to cancer or the experience of the operating surgeon because many women follow the recommendations of surgeons, their primary source of information about treatment options [12,13]. Generally, breast-conserving approach involves the removal of primary breast cancer with a margin of naturally occurring breast tissue with axillary removal and adjuvant radiotherapy. Irradiation of the remaining breast tissue after surgery is an integration part of BCS to limited the risk of local recurrence [14,15].

Recent researches have proved the merit of BCS plus radiotherapy in improving survival rates compared to MC surgery when treating women with breast carcinoma. [16,17]. Because this is related to the surgical approach, this prompted us to evaluate a cohort of women who had undergone surgical intervention of breast cancer in several centers to evaluate surgical outcomes after BCS or MC.

METHODOLOGY

This retrospective study included (172) patients (women) with breast carcinoma visited breast clinics in government and private hospitals in Kirkuk and Diyala Provinces during the period from February 2015 to March 2017. A complete history and physical examination helped determine the best surgical strategy for each individual patient, and surgeries were performed by qualified and experienced physicians. There are factors that were taken into consideration, such as having a family history, age, morbidity of elderly women, and the difficulty of general anesthesia for some patients. Besides, the evaluation of bilateral mammography was necessary to choose the type of surgery as well as to assess the presence of other suspicious lesions in the breast tissue. The inclusion criteria included female patients whose ages ranged between 31 and 69 years from both stages (I) and 2, and were followed up until March 2022, who underwent one of two surgeries, either mastectomy (MC) or conservative breast cancer surgery (CB). On the contrary, those who did not meet these criteria were excluded from this study. Over the five years of follow-up, patients were seen in the private surgical centers every three months and had a full checking every year. Few patients died during follow-up, detailed data were registered for all patients, and after verifying the accuracy of those data, they were stored in an electronic data system.. Two types of surgery were performed for the patients participating in the study, first one was conservative breast cancer surgery (CBS) in the form of extended lumpectomy with axillary lymph node removal (for node-positive cases), followed by local axillary radiotherapy. The second surgery was modified radical mastectomy (MC) with removal of the axillary lymph node. Using descriptive statistics, the tabular data were presented as frequencies and percentages (%), by the SPSS program, version (26).

RESULTS

Of the (172) female patients with breast carcinoma for early stage cases only in this study, (72) patients underwent BCT (42%), while (100) patients underwent mastectomy (58%) as displayed in figure (1).

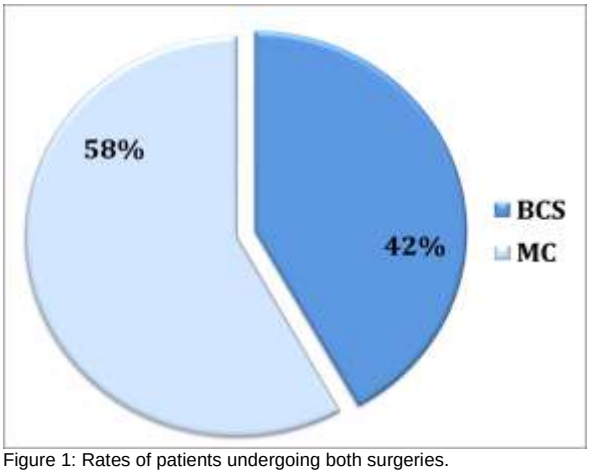

Figure 1: Rates of patients undergoing both surgeries.

In figure (2), the age groups of those patients in both surgical groups have been summarized. It was noticed that the rate of patients in BCT approach within the age of (≤39) years old was (11%), while it was in MC (10%). For the elderly (≥51), their percentage reached (56%) and (54%) in BCT and MC groups.

Only (15) patients who underwent breast conservation surgery experienced a local recurrence (9%), six of them were treated by wide local excision with safe margins, while three patients requested to complete mastectomy (figure 3).

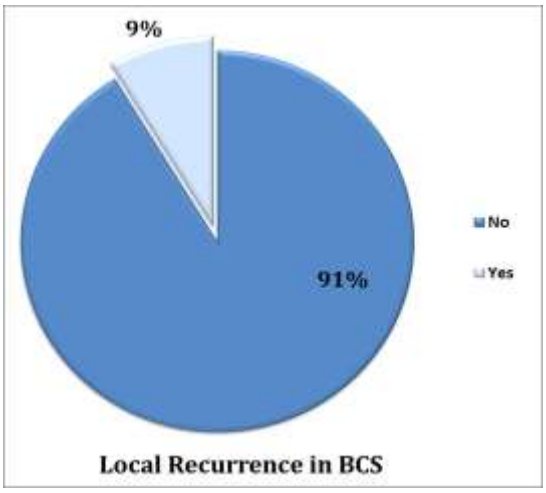

Figure 3: Local recurrence rates in BCS.

Regarding the rate of mortality in both surgeries, it was few as two patients lost their lives in the BCS group (3%) compared to four patients (4%) in the MC group as show in figures (4,5).

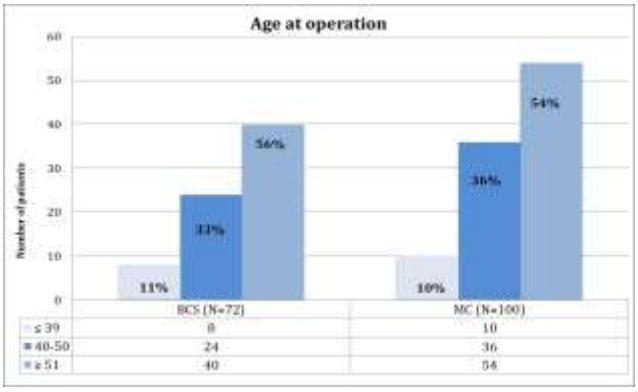

Figure 2: Distribution of patients according to age groups.

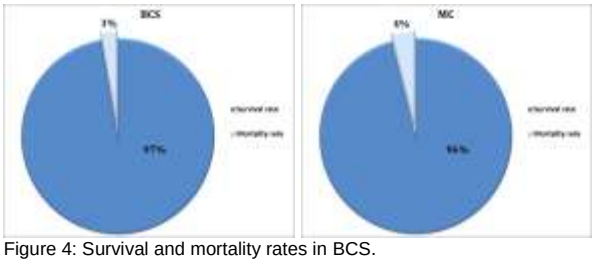

Figure 4: Survival and mortality rates in BCS.

DISCUSSION

Breast-conserving surgery has gained wide acceptance in females with early breast carcinoma due to its cosmetic and psychological advantages, with convincing long-term survival data available [18,19]. Besides, the radiation therapy followed also counteracts the potential local recurrence after conservative surgery [20].Several studies have shown that the prognosis of breast wall recurrence after conservative surgery plus radiotherapy is best than recurrence after mastectomy [21,22]. Over the years there have been a growing number of studies suggesting that female breast carcinoma patients who underwent BCT had better overall survival and lower risk of mortality compared to women who underwent MC, regardless of tumors conditions. Whereas, previous randomized trials conducted to compare BCT with MC for patients with breast carcinoma (early-stage cases) have shown parity in overall survival [23-25].

CONCLUSIONS

Through our findings, the local recurrence proportion was relatively few, and with regard to the mortality rate, it was the lowest compared to mastectomy. Therefore, it can be considered that BCT is an appropriate choice for women with breast carcinoma in early stage cases. In (2021) Wang and companions conducted a retrospective research on (1203) patients with invasive micro - papillary breast cancer (just early stage) they found that the survival outcome from the BCT approach was equivalent to that of MC. Besides, they came out with the recommendation of BCT as a standard surgical treatment when both procedures are possible [26]. In a recent population study done by Zhang et al (2021) on (2412) patients with early-stage (metaplastic) breast cancer, of whom (36.5%) underwent BCT versus (63.5%) who underwent MC. They found that when they compared the survival outcomes after both procedures for patients, the results of BCT were better [27].Christiansen and colleagues (2018) in their population survey on (58,331) women with early invasive breast cancer from (1995) to (2012) in Denmark, concluded that patients treated with BCS had better survival than patients treated with mastectomy [28]. It is worth noting, that BCT has other advantages when compared with the MC approach as a lower rate in terms of postoperative complications and economic burden [29,30]. So based on the supporting growing evidence that BCT is the preferable surgical choice for patients with early breast carcinoma and patients undergoing BCT have perfect outcomes, we recommend through this multicenter comparative study and support this surgical approach, as this type also It makes patients maintain their breasts with a healthy feeling that helps their quality of life, reduces morbidity and thus encourages improvement [31].

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