Original Article

Conservative breast surgery in Our Setup

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Background: Breast conservative surgery (BCS) has been time tested in terms of outcome for early stage carcinoma breast. The disease free period and 5 year survival is almost similar to that of modified radical mastectomy. The benefits remains in terms of breast preservation and avoiding the psychological trauma of mastectomy in females especially the younger age group. This study focuses on 50 patients undergoing breast conservative surgery. Hence discussing the outcome in terms of local recurrence and need for adjuvant therapy.

Materials and Method: A total of 50 female patients were operated on between July 2002 and August 2010. Following surgery patients underwent adjuvant therapy with chest wall radiation and hormonal therapy depending upon receptor status. Patients were followed up on 1, 6, 12 months and later on yearly basis.

Results: Mean age of the patients was 45.04 yrs and mean diameter of the tumor was 3.21cm (SD=+/- 0.923). Preoperative biopsy was +ve in 92% and ve in 8% patients. Mammograms of all the patients showed malignant changes. Five patients required neoadjuvant chemotherapy for downsizing the tumor from stage 3 to stage 2. Receptor status was +ve in 14 and ve in 36 patients. Local recurrence was present in 10 %(5) patients at follow up. Mean follow up was 48.5 months.

Conclusion: BCS is an excellent tool for early stage breast carcinoma when combined with axillary clearance and whole breast irradiation. The benefits are same in terms of outcome and survival as those of formal mastectomies, with less disfigurement. There is however need for patient education as well as strict adherence to multidisciplinary approach in treatment of this overwhelming problem. .

Keywords: Breast conservative surgery, carcinoma breast, Lumpectomy.

Introduction

Breast cancer is one of the leading causes of deaths among the female population. For this reason it has been treated aggressively over the past decades. Radical mastectomy became the treatment of choice for breast cancer. Since then newer modalities for diagnosis and treatment have been introduced, surgeons all over the world resort to less damaging procedures. Surgical resections along with Chemo, radio and hormonal therapy have become the weapons of choice against this menace.[1] Over the years, trials for less radical and more conservative approach have led to the emergence of breast conservative surgery. However, this option holds true for early stage breast cancers,[1] Patients presenting with late stage II or early stage II can also undergo BCS after receiving neoadjuvant chemotherapy for downsizing the disease.[2]

Breast conservative surgery (quadrentectomy, segmentectomy, lumpectomy, wide local excision) is performed with axillary sampling / clearance followed by radiotherapy. The adjuvant hormonal therapy depends upon the receptor status and menopausal state. All these modalities contributed to the increased life expectancy and disease free period. Other factors that add to this include negative resection margin, negative nodal status, and single small tumor.[2,3] Local recurrence have been a problem with BCS and the aim is to identify risk factors and selection of patients in order to minimize it.[4]

This study was conducted in order to determine the outcome of breast conservative surgery and to find out local recurrence.

Patients and methods

A total of 50 patients presenting with stage I or II carcinoma breast to department of surgery in Mayo Hospital and National Hospital and Medical center from 2002 to 2010 were included. Patients underwent triple assessment (History including risk factors for breast carcinoma, physical examination, biopsy and imaging) followed by counseling for conservative breast surgery. After getting informed consent for the procedure and using their data for the study, patients were assessed for fitness for anesthesia and co-morbidities. Patients with stage III disease or more,

Intralobular or multifocal carcinoma, unfit for general anesthesia or not willing for BCS were excluded. Few patients however underwent neoadjuvant chemotherapy for downsizing the disease to stage 2 followed by BCS. Per-Operatively 2cm margin was taken and specimens sent for frozen section till margin clearance was achieved. When margins were clear, level 3 axillary clearance was performed. The entire specimen was sent for histopathology and receptor status. All wounds were primarily closed under suction drains that were removed over next few days. Patients were referred to oncologist for standard whole Breast irradiation and hormonal therapy. The follow up was done on 1 month, 6 months, and then on yearly basis. Patients were evaluated for local recurrence and aesthetic outcome.

Results

The mean age of the patients was 45.04 yrs (SD=+/- 9.9) ranging from 31 to 65yrs. Mean diameter of the tumor was 3.21cm (SD=+/- 0.923). The preoperative biopsy was +ve in 92% (46) and ve in 8% (4) patients. Mammograms of all the patients showed malignant changes. Five patients (10%) required neoadjuvant chemotherapy for downsizing the tumor from stage III to stage II. Co- morbidities included Hypertension in 20% (10), diabetes mellitus in 16%(8), both diabetes and hypertension in 16%(8), others 8%(4) and no co-morbidities in 40%(20) patients. Receptor status was +ve in 28% (14) and ve in 72 %(36) patients. Receptor status +ve patients received both radiotherapy and hormonal therapy. Local recurrence was present in 10 %(5) patients at 2-3years (2 patients) and 3-4 yrs (3 patients) follow up. Mean follow up was 48.5 months (4yrs) and no patient was lost during that time.

Discussion

Breast carcinoma has been treated over the past decades with mastectomies that resulted in mutilation and disfigurement. With the evolution of science and introduction of non surgical adjuncts, breast conservative surgery has been steadily gaining popularity amongst surgeons and patients. It is now believed that BCS carries similar results as those of mastectomy.[5] In fact the psychological trauma to a female caused by mastectomy may be as severe as the disease itself.[6]

Tumor type has a role in determining the outcome of BCS. According to Arpino G et al [7], infiltrating lobular carcinoma has worse prognosis than infiltrating ductal carcinoma and for such patients the choice for BCS should not be based on histology alone. In this study we excluded the patients with ILC. BCS have better prognosis for early cancers, thus, El-Sayed MI et al[2] in their study downsized stage IIb and IIIa tumors by neoadjuvant chemotherapy and then proceeded with BCS. The local recurrence rate was 5.9% at 24 months. They recommended tumor size of $\leq$ 4cm after downsizing for BCS. We had 5 patients who underwent neoadjuvant chemotherapy. Only one of these patients has local recurrence at 3-4 years follow up. this shows that BCS can be opted for patients with later stages of breast cancers.

Breast conservative surgery involves a multidisciplinary approach of surgeons and oncologists. According to Ciani IB et al[3], margin status is the most important factor in future local recurrence. Negative margins carry better prognosis in terms of local recurrence except if the node status is positive (since dissemination is already present). The margin recommendations of 2cm clearance have now been disregarded in favor that even 2mm margin will suffice.[8,9] This is due to the fact that the disease may be multifocal.[10] In this study we initially took 2cm margin and the specimen was sent for frozen section. If a margin was not clear then it was again shaven for frozen section till all margins were clear of tumor. In this way we tried to minimize the recurrence by the only surgical means possible.

According to Sharkis DH et al,[11] irradiation after BCS has better prognosis than for BCS alone. This fact was also supported by Viani GA et al[12], stating that there is approx. 60% reduction in recurrence after lumpectomy and radiation for carcinoma breast. In this study all patients were referred to oncologists for radiation therapy, however 5 recurrences that were noted in follow up were of the patients who complied late for the radiation therapy and they later had mastectomies as second operation.

Local recurrence rate should be low with good surgical techniques,[3] and 40% local recurrence have been reported,[9] but as per 'British Association of Surgical Oncology, ' the goal should be 5% local recurrence rate at 5 years.[13] In this study we encountered a recurrence of 10% (5 patients), that may be attributed to poor patient compliance for radiotherapy. Also in the first few cases the oncologists doubted this approach and recommended mastectomies before irradiation which resulted in delay of delivering whole breast radiation. This problem was solved by frequent

oncology.

According to Pezzi CM, et al[14] tumors involving the Nipple Areola Complex (NAC) can benefit from BCS as do the peripheral tumors. In this study we had only one case of NAC tumor treated with BCS and had been disease free since her last follow up.

Conclusion

BCS is an excellent tool for early stage breast carcinoma when combined with axillary clearance and whole breast irradiation. The benefits are same in terms of outcome and survival as those of formal mastectomies, with less disfigurement. There is however need for patient education as well as strict adherence to multidisciplinary approach in treatment of this overwhelming problem.

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