

Clinical Study of CA Breast & Its Surgical Management

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BACKGROUND: Carcinoma of breast continues to be one of the most frequent cancers in woman all over world. In Indian woman, it is second to carcinoma of the cervix. The Cosmetic considerations, psychological disturbances, loss of vanity, fear of infertility and social stigmata have always hindered early diagnosis and prompt treatment of breast cancer. But in current era due to increased literacy, mass education and increased awareness about the disease; patient have started reporting earlier in hope of early diagnosis and treatment. **AIMS AND OBJECTIVES:** To study clinical features, Risk factors, Surgical management, Postoperative Complications for Ca Breast. **MATERIALS AND METHODS:** During period of 1.5 yrs 50 cases of carcinoma breast were included in current study. After through history, examination and investigations patients were subjected to modified radical mastectomy. **RESULTS:** Age of the patient varied from 30 years to 75 years with maximum number of patients seen in the 40-50 years of age group, The most common presentation was breast lump (100%), most patients had lump of size 2-5 cms range, most common quadrant is Upper Outer, most patients were presented in post menopausal period, most common histology is of ductal carcinoma & subtype is NOS, common complications are had seroma & wound infection, The axillary nodes status is the most important prognostic factor for operable breast cancer.

Key words: Modified Radical Mastectomy; Breast Cancer.

INTRODUCTION

Carcinoma of breast continues to be one of the most frequent cancers in woman all over world. In Indian woman, it is second only to carcinoma of the cervix with annual incidence of 17 per 100,000 populations. Incidence is increasing in most countries at a mean rate of 1-2% annually and soon nearly one million will develop this disease throughout the world. Hence study of its clinical features and management details of utmost importance. Carcinoma of breast presents itself in a variety of ways. Breast carcinoma is a heterogenous disease for which wide range of treatment options are available. Depending upon the staging, surgical treatment with adjuvant radiotherapy and/or chemotherapy, hormonal therapy have improved the life style and increased survival in patients of carcinoma of breast.^{1,2}

A modified radical mastectomy (MRM) is a procedure in which the entire breast is removed, including the skin, areola, nipple, and axillary lymph nodes with preservation of nerve to serratus anterior & nerve to latissimus dorsi & the pectoralis major muscle. Historically, a modified radical mastectomy was the primary method of treatment of breast cancer.^{3,4}

AIMS AND OBJECTIVES

- To study clinical features of Ca Breast
- To study Risk factors for Ca Breast
- To study Surgical management for Ca Breast
- To study Postoperative Complications

MATERIALS AND METHODS

During period from July 2014 to October 2015 50 cases of carcinoma breast were included in current study. Patients were seen in outpatient department. A thorough history of present illness was taken pertaining to symptoms like lump in breast, pain, nipple discharge, lump in axilla, jaundice, bone pain, cough, hemoptysis and breathlessness. Details of personal history regarding menarche, parity, breast feeding, along with drug history were taken. Family history of

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breast malignancy or other malignancies was enquired. A detailed and thorough clinical examination was conducted. The involved breast was assessed for lump with respect to site in the quadrants, size, shape, surface, margins, consistency, fixity to underlying structures and overlying skin i.e. mobility of lump of breast. Axilla and supraclavicular fossa were assessed for lymph nodes. Opposite breast and axilla were examined. Systemic examination was conducted to rule out systemic metastases. X-ray chest and ultrasound of abdomen was done to rule out at lung and liver metastases. Fine needle aspiration cytology was done to confirm malignancy in palpable tumours. All investigations for fitness for anaesthesia were done. They were explained about MRM, its procedure, its complications, intra-operative and postoperative and final outcome. On follow-up examination a detailed clinical examination was done to assess the incidence of loco-regional and distant recurrences & subjected to post operative radiation and chemotherapy, hormonal therapy. Institutional ethical committee clearance and written informed consent taken from the patients before enrolled into this study.

Inclusion Criteria: All females of any age groups are included in the study, ii. Patients with locally advanced breast carcinoma [stage IIIB] are included after neo adjuvant chemotherapy.

Exclusion Criteria: 1) All males Carcinoma of breast patients, 2) All recurrent Carcinoma of breast patients, 3) Patients with distant metastasis, 4) Patients with stage IV disease. As there is drainage of patients from lower socioeconomic class, we prefer radical mastectomy & avoiding conservative surgery as there is chance of lost of pt. in follow up.

RESULTS

Table 1: Age Distribution

Age (years)	No.	%
<30	1	2 %
31-40	7	14 %
41-50	26	52 %
51-60	8	16 %
61-70	7	14 %
>70	1	2 %
Total	50	100 %

Age of the patient varied from 30 years to 75 years with maximum number of patients seen in the 40-50 years of age group.

Table 2: Clinical Presentation

Symptoms	No.	%
Lump	50	100 %
Lump +Pain	2	04 %
Lump + Discharge	2	04 %
Lump + Ulcer	1	02

The most common presentation was breast lump (100%).

- 4 % patients were presented with lump with pain.
- 4 % patients were presented with discharge.
- 2 % patients were presented with lump ulcer over it.

Table 3: Clinical Stage On Presentation

Stage	No.	%
I	6	12 %
II A	19	38 %
II B	10	20 %
III A	13	26 %
III B	02	04 %
IV	00	00 %
	50	100

- The majority of patients present with stage II-a(38%) & III-a(26%).
- Quite a few patients have large operable breast cancers and stage II-b (20%).
- Some of patients have TNM stage III B (04 %) disease at presentation & were referred for down staging & operated after neoadjuvant chemotherapy.
- Only very few (approximately 12%) have stage I disease.

Table 4: Size Of Lump

Size	Nos.	%
<2 cm	9	18 %
2 – 5 cm	24	48 %
>5 cm	17	34 %
Total	50	100 %

- 24 patients (48 %) had lump of size 2-5 cms range.
- 17 patients (34%) had lump of more than 5 cms
- 9 patients (18 %) had a lump of 2 cms.

Table 5: Quadrant Involved

Quadrant	No.	%
Upper outer	27	54 %
Upper inner	5	10 %
Lower outer	8	16 %
Lower inner	8	16 %
Central	2	4 %
Total	50	100 %

- 54 % cases presented with lump in UOQ, 16 % in LOQ, 10% in UIQ, 16 % in LIQ.
- The most common quadrant involved was the upper outer quadrant (54%) followed by the lower outer and inner quadrant (16% each).

Table 6: Side of Breast Involved

Side	No.	%
Right	22	44 %
Left	28	56 %
Total	50	100 %

- 56 % patients (28) were presented with lump in left side of breast in comparison to right breast which were 44 % (22).

Table 7: clinical Lymphadenopathy On Presentation

Lymphadenopathy	Present	Absent
No.	22	28
Percentage	44 %	56

- 44 % patients (22) were presented with palpable axillary lymphnodes in comparison to 56 % patients (28) who do not had lymphadenopathy on presentation.

Table 8: Incidence In Relation To Menopause

	No	%
Post menopausal	34	68 %
Pre menopausal	16	32 %
Total	50	100%

- 68 % patients (34) were presented in post menopausal period in comparison to 32 % patients (16) who were pre menopausal on presentation.

Table 9: Lymphadenopathy In Relation To Menopause

	lymphadenopathy	%
Post menopausal	17	77.27
Pre menopausal	05	22.27

- About 77 % patients (17/22) were presented in post menopausal period in comparison to about 22 % patients (05/22) who were pre menopausal on presentation.

Table 10: Parity

No. of children	No.	%
0	3	06 %
1-3	38	76 %
>3	9	18 %
Total	50	100 %

- patients (06 %) were nulliparous.
- 38 patients (76 %) having parity of 1-3.
- 09 patients (18 %) having parity of more than 3.

Table 11: Histological Type of Carcinoma

Type of carcinoma	No.	%
Ductal	48	96 %
Lobular	02	04 %
Total	50	100 %

- 96 % patients (48) were of ductal carcinoma followed by lobular carcinoma in 04 % patients(2).

Table 12: Complications

Complication	No.	%
Seroma	05	10 %
Wound infection	06	12 %
Impaired shoulder movement	06	12 %
Lymphoedema	01	02 %
Paressthesia	04	08 %
Recurrence	00	00%

- 10 % patients (05) had seroma.
- 12 % patients (06) had wound infection
- 12 % patients (06) had complain of impaired shoulder movement
- 08 % patients (04) had complain of paressthesia
- 02 % patients (01) had lymphoedema
- None of the operated patients had recurrence

Table 13: Sub-Type of Carcinoma

Carcinoma	No.	%
Ductal in situ	5	10 %
Ductal invasive	43	86 %
Lobular in situ	1	02 %
Lobular invasive	1	02 %
	50	100 %

- 10 % patients (05) were of ductal ca in situ
- 86 % patients (43) were of invasive ductal ca
- 02 % patients (01) were of lobular ca in situ
- 02 % patients (01) were of invasive lobular ca

Table 14: Histopathology

Subtype	No.	Percentage
NOS	41	82 %
Medullary	6	12 %
Apocrine	2	04 %
Papillary + Comedo	1	02 %

- 82 % patients (41) were of NOS subtype.
- 12 % patients (06) were of medullary subtype
- % patients (02) were of apocrine subtype
- 02 % patients (01) was of papillary with comedo subtype

DISCUSSION

Each year more than one million women are diagnosed with breast cancer worldwide over half of whom will die from the disease. Extensive breast cancer screening programmes and the development of new treatments have improved the prognosis of breast cancer overall. However the average 5 year survival rate for women with late stage or advanced breast cancer remains low. On average only 35% of women with advanced breast cancer are alive five years after diagnosis. A third of women are diagnosed with breast cancer at a late stage IV when the disease has a poor prognosis.

❖ **Indian breast cancer patients present with advanced disease stage:** overall poor health awareness, awareness of breast cancer is poor, general indifference towards women's health, the lack of breast cancer screening programs, delay in seeking advice for a recognized health problem due to financial and social reasons

❖ The points of carrying out this study are following 5 main reasons in Indian scenario :

- Age shift (more young ladies affected)
- Rising numbers of cases of breast cancer in india
- Late presentation (this directly decreases long term survival of the patient)
- Lack of awareness and screening (screening is the single most important factor responsible for better survival of patients in the west)
- Aggressive cancers in young (generally, the younger the age below menopause, the more aggressive the cancer).

❖ In our study of 50 patients,

- **Age** of the patient varied from 30 years to 75 years with maximum number of patients seen in the 40-50 years of age group, similar to the study conducted in India.⁵ The mean age of the patients was found as 49.92. In western literature, the incidence is shown to be higher in the older age group, mean age more than sixty years. Almost 68% patients are below 50.
- The most common presentation was **breast lump** (100%). Other literatures⁶

mention similar presentation, Tyagi et al⁷ reported 100% of the cases presenting as lumps. 24 patients (48%) in our study presented with breast lump of size 2-5 cms range, 17 patients (34%) had lump of more than 5 cms and 9 patients had a lump of 2 cms. This is in contrast to the studies published in the western literature where most of the patients has a lump size of less than 2 cms probably due to the better screening facilities available, with an increased emphasis on mammographic examination and early detection, along with patient education regarding the disease and self-examination.

• **Nipple discharge** is not a frequent complaint of a frequent sign of mammary carcinoma.

• **Axillary lymphadenopathy**⁸ It was observed in our study that 22 patients (44%) had positive axillary nodes clinically. It was also noticed that clinically palpable nodes were less than the number of nodes in the specimen. In our study, most of the lymph nodes involved were in the pectoral group (36%). There have been a few studies correlating the tumor size and the status of the lymph nodes. With increase in tumor size, it was observed that the number of patients with positive lymph nodes also increased. All the patients having tumor of size more than 5 cms had positive Axillary lymph nodes. Our study had a maximum number of patients with tumor 2-5 cms (48%). This is probably due to the poor screening facilities available and lack of awareness among the general population regarding self examination and the disease. The mean number of lymph nodes removed by Axillary dissection was 8 (3-17).

• **The axillary nodes status is the most important prognostic factor for operable breast cancer**⁹. A micrometastasis is defined as tumour infiltration less than 2mm in diameter. Macro-metastases is defined as tumour infiltration >2mm in diameter. Patients with microscopic nodal involvement have a better prognosis than those with macroscopic nodal involvement.

- **Fraher B et al¹⁰** have found that a progressive increase occurs in both the incidence of axillary involvement and the number of positive nodes with tumour size.
- According to **R.C.G. Russell, N.S.Williams and C.J.K. Bulstrode in Bailey and Loves' short practice of surgery 23rd edition¹¹**, 60% in UOQ, 12% in UIQ, 10% in LOQ and 6% in LIQ. In current study, 54 % cases presented with lump in UOQ, 16 % in LOQ, 10% in UIQ, 16 % in LIQ. The most common quadrant involved in our study was the upper outer quadrant (54%) followed by the lower outer and inner quadrant (16% each).
- **Family history** of breast carcinoma is a predisposing factor in development of breast malignancy. Women with one affected first degree relatives have twice the risk of women without affected relatives in developing breast cancer and the risk increases as the number of affected relative increases, but in this study none of the patients had **family history** of breast carcinoma.
- Breast carcinoma is more frequent in women who have no children or are **unmarried** with risk of 1.4 as compared to 0.5 in patients who conceive before age of 20years. **In current study**, 3 (6%) patients are nulliparous⁵ & (20 %) patients had conceive before age of 20years. maximum number of cases 76 % had issues between 1-3. In current, maximum number of cases had **breast fed** their children for more than 12 months. Breast feeding reduces the risk of developing breast malignancy; this is due to the hormonal changes that occur during lactation.
- **TNM staging** : Almost 50% of patients present with locally advanced disease. The majority of patients present with stage II-a (38%) & III-a (28%) in comparison to stage III-b (35% at SGPGIMS Lucknow) and III-a (27%). Quite a few patients have large operable breast cancers and stage II-b (22%). Some of patients have TNM stage IIb disease at presentation & were referred for down staging and only very few (approximately 12%) have stage I disease.
- **FNA or core biopsy** of a palpable breast mass can usually be performed in an outpatient setting.¹² When a breast mass is clinically and mammographically suspicious, the sensitivity and specificity of FNA biopsy approaches 100%. In current study all patient underwent FNA Biopsy & found to be 100 % positive.
- We operated all 50 patients for modified radical mastectomy (**AUCHINCLOSS' VARIETY**) with a negative suction drain placement, after proper explained consent to patient & her relatives & after fitness from physician & anaesthetist. The study showed that **mean duration of the surgical procedures** was 95 mins. The mean number of lymph nodes resected was 8(3-17). There were no differences in terms of vascular or nerve sections, hematomas or infections. Patients were started orally after 6 hours of surgery & advised for ambulation. We routinely open the dressings on 5th post operative day unless there is evidence of infection. **Mean hospital stay** is about 7 days & drains were removed after the output had decreased to less than 30 ml/day, usually on 7th post operative day.
- **Ivens D, Hoe al, Podd JJ¹³** observed that paresthesia developed in 70%, weakness in 25% and lymphoedema in 10% following axillary dissection. In current study, paresthesia seen in 08%, impaired shoulder movement in 12 % and lymphoedema in 02 % cases. The most common surgery related complication is seroma. The study concluded that seroma formation is a common complication of the modified radical mastectomy. Neoadjuvant chemotherapy marginally increased the risk, but diabetes had no role in seroma formation.
- An association of postoperative seromas with neoadjuvant chemotherapy was noted. Additionally, it appears that immediate reconstruction may reduce the incidence of postoperative seromas, presumably by filling the dead space in the chest wall. The results of the study concluded that the average post

operative days for **wound infection** estimated were five days whereas the average post operative days for **seroma formation** estimated were ten days. The complications include wound infection⁵⁶ was found in 6 (12%) patients while 05 (10%) patients had seroma formation. These complications were more in stage II disease. Patients who reported more symptoms were found to have higher levels of psychological distress⁵⁷.

- **The most common histological type** in our study was Infiltrating Ductal carcinoma of the Not Otherwise Specified group (82%) that correlated with other standard texts. Available literature reveals that the number of metastasis is related to the aggressiveness of the tumor. It was also observed in our study that postmenopausal patients had increased axillary nodal involvement as compared to premenopausal patients. In current study, 86 % cases were of infiltrating duct carcinoma followed by ductal carcinoma in situ 10 % , lobular carcinoma 4 % . Infiltrating duct carcinoma is the prototypical common adenocarcinoma of the breast presents in a perimenopausal or postmenopausal women in the 6th decade as a solitary, non-tender, firm and ill-defined mass.
- All patients were followed up in OPD after 1 week, 2 weeks, 1 month, 3 months, 6 months & 12 months. 03 patients were lost during follow up.
- All patients were sent for chemotherapy / Radiotherapy / hormonal therapy. On an average, patients get 6 cycles of chemotherapy (CMF).
- 02 patients were required split thickness skin grafting & another 02 patients were operated after neo-adjuvant chemotherapy.

CONCLUSION

- Almost all Indian breast cancer patients self-detect their disease at a late stage when it presents with a palpable lump or even at a stage when it has resulted in secondary changes such as local skin or chest wall changes or distant metastasis.
- Young age has been associated with larger tumor size, higher number of

metastatic lymph nodes, poorer tumor grade, low rates of hormone receptor positive status, earlier and more frequent loco-regional recurrences and poorer overall survival.

- Younger age group is high risk group, so various modalities of early diagnosis & management should be targeted to that age group.
- Breast cancer awareness programs are more concentrated in the cities and have not reached the remote and rural parts of the country.
- The recent emphasis by governmental agencies, institutions and non-governmental and charity organizations on improved health awareness, promotion of early detection, providing comprehensive multimodality treatment in a protocol-based manner and providing support for breast cancer management as well as for screening and rehabilitation have resulted in an improving trend with more and more early stage cancers being diagnosed and treated timely, resulting in improving survival and quality of life of Indian breast cancer patients.
- In the coming years, the most important steps needed are creating awareness about breast cancer risk factors, early detection, along with making screening available to the population at risk and providing multimodality treatment available to the majority at an affordable cost. The needs of the coming decades would perhaps be better served by small community cancer centres which are cost-effective and can manage most cancer patients in their own localities

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