

# “A Study Of Recurrence In Locally Advanced Breast Carcinoma After Surgical Management”

Dr. Priyanshu Shekhar, Dr. Shailesh Kumar Katiyar, Dr. Mahesh Gupta,  
Dr. Roshin Mathew Philip, Dr Pooja Gupta

Mbbs, Post Graduate Department Of General Surgery Rama Medical College Hospital And Research Centre,  
Kanpur, U.P. Pin:209217

Professor, Department Of General Surgery Rama Medical College Hospital And Research Centre, Kanpur, U.P.  
Pin:209217

Ms, Dmas, Fmas, Fiages, Professor And Head Department Of General Surgery Rama Medical College Hospital  
And Research Centre, Kanpur, U.P. Pin:209217

Mbbs, Post Graduate Department Of General Surgery Rama Medical College Hospital And Research Centre,  
Kanpur, U.P. Pin:209217

Md Medicine, Sgl Charitable Hospital Jalandhar

---

## Abstract

**Background:** breast cancer being the 2<sup>nd</sup> most common malignancy in females requires special considerations regarding the treatment modality in this modern era. However the various treatment regimes followed always pause a dilemma regarding the recurrence rates followed by various surgical procedures.

**Objective:** To study the recurrence rates in LABC after surgical management.

**Materials and Methods:** Sixty patients from Rama Medical Hospital Kanpur were included, categorized into two groups: Group A (toilet mastectomy followed by chemoradiation) and Group B (mastectomy with axillary clearance or MRM followed by radiotherapy +/- chemotherapy).

**Results:** Recurrence rates were significantly higher in the toilet mastectomy group (33.33%) compared to the MRM group (6.67%).

**Conclusion:** Most recurrences occurred within 6-10 months. Limitations include the lack of long-term follow-up data. Future studies should address these limitations to better assess treatment durability and recurrence dynamics. The findings underscore the impact of surgical choice on recurrence rates in LABC, emphasizing the need for careful surgical planning.

**Keywords:** LABC, EBC, MRM, toilet mastectomy

---

Date of Submission: 04-12-2024

Date of Acceptance: 14-12-2024

---

## I. Introduction

Breast cancer is the 2<sup>nd</sup> in terms of mortality with an average incidence rate of 13.5% [1-3]. It can either present as early breast cancer (EBC), Locally advanced breast cancer (LABC) or with distant metastasis. This is influenced by various risk factors including age, race, economic status, iodine deficiency, high estrogen levels, high radiation exposure, alcohol, high intake of fat [4].

LABC presents most commonly with skin, pectoralis and chest wall involvement [5]. Carcinoma with distant metastasis is considered to be stage 4 where the tumor cells have invaded the lymphatic and vascular structures thereby promoting more metastasis to distant organs like liver stomach, and ovaries (krukenbergs tumour) [6,7]. The routine investigations include FNAC, USG breast, and mammography [8-11]. Core needle biopsy is done when FNAC is inconclusive. In early breast cancer, MRM (Modified Radical Mastectomy) is routinely done. In LABC treatment options are MRM, Mastectomy with axillary clearance, and Toilet mastectomy with post-operative adjuvant chemotherapy. In metastatic breast carcinoma, usually systemic therapies are given rather than surgery like hormonal therapy, or chemotherapy [12]. In developing nations, despite widespread public information efforts, mammography programs, and systematic screening, LABC remains a prevalent clinical presentation of disease. Following surgery, the recurrence rate of LABC is 6%, relapsing time of 14 months [13]. This study helps to study the recurrence in locally advanced Breast carcinoma after surgical management.

## II. Materials And Methods

Patients presenting with breast lumps to the emergency /OPD of Rama Medical Hospital Kanpur were evaluated based on a proper questionnaire including the basic profile of the participants i.e.name, age, sex, height,

clinical examination, etc. The proforma will also include personal details, clinical findings, investigations, intraoperative findings, histopathological findings, and investigations related to the study. A total of 60 patients were taken for this study based on inclusion criteria of 1) patients presenting with features suggestive of locally advanced breast cancer, and 2) considering both the sexes( male and female ). All patients with features of EBC and other benign breast diseases was excluded from this study. The patients who were selected were divided into 2 groups after a confirmatory diagnosis was made through clinical examination, FNAC, USG, and, mammography.

Group A had a fungating breast mass with fixed axillary lymph nodes and underwent toilet mastectomy followed by chemoradiation whereas Group B had breast mass with mobile axillary lymph nodes for which mastectomy with axillary clearance / MRM followed by radiotherapy (+/- chemotherapy) was done. The follow-up of the patient was be done after every 2 months in 1st year and every 4 months in 2nd year, which will include breast examination, mammography, and USG whole abdomen. Depending on the findings of the patient in the follow-up, the recurrence rate after surgical management in both groups will be evaluated.

### III. Results

Out of 60 patients 18 patients (30%) were of 40-50 years of age , 19 patients (31.7%) with 51-60 years of age and 23 patients ( 38.3%) with more than 60 years. All the patients included in the study were married of which 22 patients ( 36.7%) were in pre-menopausal status and 38 patients ( 63.3%) were in post menopausal status. 7 patients ( 11.7%) was nulliparous and 53 patients ( 88.3 %) were multiparous. According to BMI, 9 (15%) were underweight, 22 (36.7%) were normal, 20 (33.3%) patients were overweight and 9 (15%) patients were obese.

The clinical stage of patients were assessed of which 16 patients ( 26.67%) had T3 stage and 44 patients (73.33%) had T4 stage ( table 1 ). According to the FNAC report the type of the malignancy was also assessed which showed there were 51(85%) patients who had ductal invasive carcinoma and 9 (15%) patients had lobular invasive carcinoma (table 2). Core needle biopsy of the patients was done which was suggested that 35 (58.3%) patients had positive Er status and 25 (41.7%) patients had negative Er status. 24 (60%) patients had positive Pr status and 36 (60%) patients had negative Pr status. 29(48.3%) patients had positive HER2NEU status and 31 (51.7%) patients had negative HER2NEU status. Based on the lymph node status and the staging, 30 (50%) patients underwent toilet mastectomy, and 30 (50%) patients underwent MRM ( table 4). 45 (75%) patients took complete chemotherapy and radiotherapy, 8 (13.33%) patients took incomplete treatment and 7 (11.67%) did not take chemotherapy and radiotherapy. 6 patients of 45 who took complete treatment showed recurrence, 2 patients of 6 who took incomplete treatment shown recurrence and 4 patients of 7 who not took treatment shown recurrence ( table 5). 1 (1.7%) patient had recurrence before  $\leq$  5 months, 5 (8.3%) patients had recurrence in 6-10 months. 3 (5%) patients had recurrence between 11-15 and 16-20 months each (table 6). 30 (50%) patients underwent toilet mastectomy and 30 (50%) patients underwent MRM. 10 (33.33%) patients of 30 who underwent toilet mastectomy had a recurrence and 2 (6.67%) patients of 30 underwent MRM showed recurrence (table 7). It was found that there was a significant association between them ( $p>0.05$ ). No. of patients with recurrence were significantly higher who underwent toilet mastectomy (33.33%) than patients who underwent MRM (6.67%)

**Table 1: Association Between Clinical T Stage And Pathological T Stage**

Clinical T stage	Pathological T stage				Total		Chi square statistic	p value
	T3		T4		F	%		
	F	%	F	%				
T3	16	100	0	0	16	26.67	60	<0.001*
T4	0	0	44	100	44	73.33		
Total	16	26.67	44	73.33	60	100		

**Table 2: Distribution Of Patients According To Pathological Type**

Pathological type	Frequency	Percent
Ductal invasive carcinoma	51	85
Lobular invasive carcinoma	9	15
Total	60	100

**Table 3: Distribution Of Er, Pr And HER2NEU Status Of Patients With Breast Carcinoma**

Variables	Frequency	Percent
<b>ER status</b>		
Positive	35	58.3
Negative	25	41.7
<b>PR status</b>		
Positive	24	40
Negative	36	60
<b>HER2NEU status</b>		
Positive	29	48.3
Negative	31	51.7
Total	60	100

**Table 4: Distribution Of Patients According To Surgical Procedure**

Surgical procedure	Frequency	Percent
Toilet mastectomy	30	50
MRM	30	50
Total	60	100

**Table 5: Association Between Recurrence With Chemo And Radio**

Chemo and Radio	Recurrence				Total		Chi square statistic	p value
	Yes		No		F	%		
	F	%	F	%				
Completely taken	6	13.33	39	86.67	45	75	7.41	0.02*
Incomplete	2	25	6	75	8	13.33		
Not taken	4	57.14	3	42.86	7	11.67		
Total	12	20	48	80	60	100		

**Table 6: Distribution Of Patients According To Recurrence Time (Months)**

Recurrence time (months)	Frequency	Percent
≤ 5	1	1.7
6-10	5	8.3
11-15	3	5
16-20	3	5
Total	12	20

**Table 7: Association Between Recurrence And Surgical Procedure**

Surgical procedure	Recurrence				Total		Chi square statistic	p value
	Yes		No		F	%		
	F	%	F	%				
Toilet mastectomy	10	33.33	20	66.67	30	50	6.67	0.01*
MRM	2	6.67	28	93.33	30	50		
Total	12	20	48	80	60	100		

#### IV. Discussion

Recurrence in LABC is an important concern due to the disease's aggressiveness. Recurrence can occur locally in breast, chest wall, or regional lymph nodes, or as distant metastasis affecting other organs. Understanding the risk factors, prevention strategies, detection, and treatment options for recurrence is crucial for managing LABC.

**Anderson et al. (2005)** Compared MRM, toilet mastectomy, and lumpectomy in 180 patients with LABC. Recurrence Rate for MRM was 9%, for Toilet Mastectomy was 28% and for Lumpectomy was 20%. MRM provided the best local control, followed by lumpectomy and then toilet mastectomy. The findings reaffirm the effectiveness of MRM in reducing recurrence, in line with the current study's outcomes.

In our study of 60 patients, 26.67% were in the T3 stage and 73.33% in the T4 stage. Ductal invasive carcinoma was present in 85%, while 15% had lobular invasive carcinoma. ER status was positive in 58.3% and negative in 41.7%; PR status was positive in 40% and negative in 60%; HER2/neu status was positive in 48.3% and negative in 51.7%. Treatment types were evenly split between toilet mastectomy (50%) and modified radical mastectomy (MRM) (50%). Chemotherapy and radiotherapy were completed by 75%, partially completed by 13.33%, and not undertaken by 11.67%. Recurrence occurred in 6 patients with complete treatment, 2 with incomplete treatment, and 4 without treatment, primarily within 6-10 months (8.3%). Significantly, recurrence was higher in patients undergoing toilet mastectomy (33.33%) compared to MRM (6.67%), indicating a notable association between the type of surgery and recurrence rates.

#### V. Conclusion

The study reveals that the majority of carcinoma patients were above 60 years, married, post-menopausal, and multiparous, with many having no comorbidities. This study highlights that while ductal invasive carcinoma is prevalent among the patient cohort, the type of surgical procedure significantly influences recurrence rates, with toilet mastectomy associated with higher recurrence compared to MRM. The study did not provide long-term follow-up data, which is crucial for assessing the durability of treatment outcomes and recurrence rates. Future research should incorporate long-term follow-up to better understand treatment outcomes and recurrence dynamics, ultimately guiding more effective clinical decision-making.

#### References

- [1] Maxwell GP, Gabriel A. The Evolution Of Breast Implants. *Clin Plast Surg.* 2009 Jan. 36(1):1-13, V. [Qxmd MEDLINE Link].
- [2] Maxwell GP, Gabriel A. Breast Reconstruction. Aston SJ, Steinbrech DS, Walden JL. *Aesthetic Plastic Surgery.* Philadelphia, Pa: Elsevier; 2009. Chap 57.
- [3] Jones, GE, Ed. *Bostwick's Plastic And Reconstructive Breast Surgery.* 3rd Ed. St. Louis, Mo: Quality Medical Pub; 2010.
- [4] Mathes SJ, Nahai F. *Reconstructive Surgery: Principles, Anatomy, And Technique.* New York, NY: Churchill Livingstone; 1997.
- [5] Pansky B. *Review Of Gross Anatomy.* 6th Ed. New York, NY: Mcgraw-Hill; 1996.
- [6] Rees TD, Latrenta GS. *Aesthetic Plastic Surgery.* 2nd Ed. Philadelphia, Pa: WB Saunders; 1994. 7. Thorne CH, Beasley RW. *Grabb And Smith's Plastic S*
- [7] Thorne CH, Beasley RW. *Grabb And Smith's Plastic Surgery.* 6th Ed. Philadelphia, Pa: Wolters Kluwer Health/Lippincott Williams And Wilkins; 2007.
- [8] The Cancer Genome Atlas Network. *Comprehensive Molecular Portraits Of Human Breast Tumours.* *Nature.* 2012 Oct 4. 490(7418):61-70. 54
- [9] Hilton BA, Crawford JA, Tarko MA. Men's Perspectives On Individual And Family Coping With Their Wives' Breast Cancer And Chemotherapy. *Western Journal Of Nursing Research.* 2000; 22(4):436.
- [10] Jemal A, Siegel R, Ward E Et Al. *Cancer Statistics.* *A Cancer Journal For Clinicians* 2008; 58:71-96.
- [11] *Incidence Of Breast Carcinoma.* International Agency On Research Of Cancer ; World Health Organization. 2021;1-2.
- [12] Shishegar A. *New Breast Cancer Screening.* *Journal Of Army University Of Medical Sciences Of Thei. R. Iran.* 2011; 9(1):58-66.
- [13] K Rajgopal S And Anitha S. *Manipal Manual Of Surgery.*3rd Edition, 2010:351