

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Histopathology Of Patients With Carcinoma Breast Undergoing Modified Radical Mastectomy: Observational Study.

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ABSTRACT

In women undergoing surgery for carcinoma breast, which consists of lumpectomy and whole-breast irradiation or modified radical mastectomy, there has been a lack of consensus as to what constitutes a negative margin. This was an observational study (Retrospective Descriptive Cross-sectional Study). Patient data will be collected from all patients attending RMC General Surgery OPD casualty willing to get admitted and inpatient department, irrespective of their age (in adults)/gender/background/socio-economic status who underwent surgery and were willing to participate in the study. The patients were evaluated and followed up according to pre-decided protocol. 9 patients in our study were seen to have grade 2 tumors and 21 patients had grade 3 tumors. All the patients included in the study had invasive ductal carcinoma confirmed on trucut or incisional biopsy and all of them were unifocal confirmed on pre operative imaging as well as post operative histopathology report. As a conclusion invasive ductal carcinoma was the most common histological type breast cancer.

Keywords: Histopathology, Breast carcinoma, ductal carcinoma

<https://doi.org/10.33887/rjpbcs/2022.13.5.7>

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INTRODUCTION

In women undergoing surgery for carcinoma breast, which consists of lumpectomy and whole-breast irradiation or modified radical mastectomy, there has been a lack of consensus as to what constitutes a negative margin [1]. Microscopic disease resulting from a positive margin is more problematic because theoretically, cancer in the relatively hypoxic environment of the prior surgical scar bed will be resistant to radiation therapy further emphasizing the importance of adequate margins [2, 3]. Current evidence indicates that wider margins do not reduce local recurrence compared to “no tumor on ink”. Disease burden as defined by margin status was felt to be the primary determinant of local control [4]. Over time, it has become increasingly clear that both the underlying biology of the tumor and the availability of effective systemic therapy are also critical components influencing local control [5].

This study endeavors to evaluate status of the surgical margins in patients undergoing surgery for carcinoma breast. This will enable us to determine whether a patient will require adjuvant radiation therapy post-surgery [6]. This is particularly beneficial in rural setup where patients do not return for follow up regularly after undergoing surgery and will thus enable us in providing more complete treatment to early-stage breast cancer.

METHODOLOGY

This was an observational study (Retrospective Descriptive Cross-sectional Study). Patient data will be collected from all patients attending RMC General Surgery OPD casualty willing to get admitted and inpatient department, irrespective of their age (in adults)/gender/background/socio-economic status who underwent surgery and were willing to participate in the study. The patients were evaluated and followed up according to pre-decided protocol.

Inclusion Criteria

- All age groups male and female patients presenting to Pravara Rural Hospital with Carcinoma Breast of stage up to T2N1M0 or below undergoing modified radical mastectomy and willing to participate in the study.
- Confirmed breast cancer (IDC, DCIS, ILC) with indication to undergo surgery.
- Patients with IDC who have received neoadjuvant chemotherapy may participate in the study.

Exclusion Criteria

- Any surgery performed for local recurrence of carcinoma breast.
- General or local contra-indication for surgery
- Inflammatory breast cancer.
- Radiotherapy of the ipsilateral breast.
- Pregnancy or lactation.

In present study most of the cases had age more than 40 years of age. 30% each cases were seen having age between 41 – 50 years of age and more than 60 years of age respectively.

The youngest patient was 33 years old and the oldest patient was 75 years old with mean age of 55.31 years.

RESULTS

Table 1: Distribution of patients according to Histopathological Grade of tumor

GRADE	NUMBER OF PATIENTS	PERCENTAGE
II	9	30%
III	21	70%
TOTAL	30	100%

9 patients in our study were seen to have grade 2 tumors and 21 patients had grade 3 tumors.

All the patients included in the study had invasive ductal carcinoma confirmed on trucut or incisional biopsy and all of them were unifocal confirmed on pre operative imaging as well as post operative histopathology report.

Table 2: Distribution of cases as per Progesterone receptor status

PR	No of cases	Percentage (%)
Positive	17	56.67
Negative	13	43.33
Total	30	100

In present study 56.67% cases had positive PR where 43.33% cases were found negative on PR. 17 patients i.e; 56.6% patients were both ER and PR positive.

Table 3: Distribution of cases according to HER2NEU status

HER2NEU	No of cases	Percentage (%)
Positive	13	43.33
Negative	17	56.67
Total	30	100

In present study 43.33% cases were positive on HER2NEU

DISCUSSION

The study conducted by Lovricks et al [7] in 2002 in the Netherlands had a high rate of margin positivity i.e; 26% probably as only cases of breast conservation surgery were included in the study. Patients with positive margins were mostly managed with re- excisions in this study. Due to advances in pre- operative diagnosis and better selection of patients, the rate of margin positivity has reduced with time. Similarly, the study conducted by Atkins et al [8] in 2012 at Missouri also had a higher rate of margin positivity i.e.; 38% as only cases of breast conservation were included in the study and the mean lump size was considerably more as compared with our study.

The rate of margin positivity was only 2.7% in a study conducted by Lupe et al in 2003 at Canada probably as only cases up to stage T3 were included in the study. The positive margins in most cases were managed with either re-excision or mastectomy depending upon age of the patients, tumor biology and location of the tumor. Other options include radiation boosts to the tumor bed and other adjuvant treatments.

The histopathological margins of the specimen sent post operatively were all negative in our study and thus no re-excision or repeat surgery was advised to any patients The low margin positivity rates in our study can be attributed to the decision of performing more radical surgery in the patients along with the compliance of most patients to the advised adjuvant chemotherapy and radiation schedule. Along with histopathology, the pathologist was also requested to comment on the hormone status and HER 2 NEU status of the specimen. 17 patients were positive for estrogen receptor, 17 were positive for progesterone receptor and 13 were positive for HER 2 NEU [9].

CONCLUSION

As a conclusion invasive ductal carcinoma was the most common histological type breast cancer.

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