

CLINICO PATHOLOGICAL STUDY OF CARCINOMA BREAST: A PROSPECTIVE STUDYK. C. Madhu Shankar¹, T. R. Hari Prasad², S. T. Prahlad³¹Assistant Professor, Department of General Surgery, Rajarajeswari Medical College.²Associate Professor, Department of General Surgery, Rajarajeswari Medical College.³Assistant Professor, Department of General Surgery, Rajarajeswari Medical College.**ABSTRACT****BACKGROUND**

Breast cancer is the most frequently diagnosed cancer in women and the second most cause of death in cancer. Over the past several decades there has been increase in incidence of the disease. Analysis of the incidence, clinical presentations, various risk factors, accuracy of FNAC and frozen section, incidence of various pathological types, stage at presentation and ER, PR, HER-2/neu status.

METHODS

In this prospective study, 51 consecutive patients who were diagnosed to have carcinoma breast admitted between April 2013 to April 2014 in the Department of Surgery, Rajarajeshwari Hospital, Bangalore, were included in the study. A detailed clinical history was elicited from all patients at the time of admission. All patients who had triple assessment evidence of malignancy were worked up for surgery with necessary investigations. Written consent was obtained from each patient for surgery. After data collection, it was checked, verified, edited manually for consistency to reduce error. Descriptive and graphical methods were used in analysing the data. The important variables were considered and analysed to fulfil the objective of the study.

RESULTS

In our study, the incidence of carcinoma breast is 5.6 per 1000, 32% of them were between 41-50 year age group, 63.3% had early menarche, 14.3% were nulliparous. Nearly 84.3% of them presented with lump of which 54% left sided involving upper outer quadrant 54.9%. Most cases belong to stage II and stage III at the time of presentation. FNAC was done in all cases with accuracy rate of 82.4%, followed by frozen section which showed about 71.4% of accuracy for those false negative cases.

CONCLUSION

Various risk factors in relation to breast carcinoma have been proved. As most of the cases presented late in our series because of lack of awareness, proper awareness and early screening by breast self-examination and mammogram should be emphasized. FNAC proved to be a simple and reliable procedure with good accuracy rate.

KEYWORDS

Carcinoma Breast, FNAC, Risk factors, Histopathology.

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INTRODUCTION

Breast cancer is the most common site specific cancer in women and is the leading cause of death from cancer for women aged 20–59 yrs.¹ Peak incidence is in the 5th and 6th decades, but in India the disease is seen a decade earlier—the mean age of occurrence is 42, as compared to 53 in white women. Breast cancer causes 5,19,000 deaths in a year worldwide, about 9,00,000 women are diagnosed each year.² 1 in 8 women have lifetime risk of developing breast cancer.² In Indian women breast cancer is the most common cause of cancer death. It is reported that breast cancer is proportionately on the rise in a few metropolitan areas of India.

This appears to be related to late marriage, birth of the first child at a later age, fewer children and short period of breast feeding, which are increasingly common practice among the educated urban women.³ The natural history of breast cancer is characterized by long duration and heterogeneity among patients.

AIM OF THE STUDY

- To evaluate the clinical presentation and pathological features of breast cancer with respect to age and stage of the disease.
- To correlate the clinical findings with FNAC reports and postoperative histopathology reports.

MATERIALS AND METHODS**Inclusion Criteria**

All patients who were diagnosed to have carcinoma breast.

METHODOLOGY

A detailed clinical history was elicited from all patients at the time of admission. All patients who were diagnosed with carcinoma breast based on triple assessment were worked up

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for surgery with necessary investigations. Written consent was obtained from each patient for surgery.

ETHICS

The procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (Institutional or Regional) and with the Helsinki Declaration of 1975 that was revised in 2000. (http://www.wma.net/e/policy/17-c_e.html.)

DATA ANALYSIS

After collection, the data was checked, verified, edited manually for consistency to reduce error. Descriptive and graphical methods were used in analysing the data. Chi square test and p value were considered for student t test and analysed to fulfil the objective of the study.

RESULTS

The following data were obtained from the present study of 51 cases studied in Department of Surgery, Rajarajeswari Medical College and Hospital, Bangalore, from April 2013 to April 2014.

Age in Years	No. of Patients	Percentage
<20	0	0
21-30	1	2
31-40	7	14
41-50	16	32
51-60	12	24
61-70	8	16
>70	6	12
Total	50	100

Table 1: Age Distribution

In our study, most of the patient's cases belonged to 41-50 yrs age group, of which male constitute 2%; 57.2% were post-menopausal state; 14.3% were nulliparous, who were not breast fed. In our study only 2% had family history; 84.3% of patients presented with breast lump upper outer quadrant (54.9%) and 92.15% presented with >2cms tumour. When age is stratified for 20 years, there is significant increase in incidence in 41-60 age group as p <0.05.

Stage	No. of Cases	Percentage
0	0	0
I	3	5.9
IIA	15	29.4
IIB	9	17.6
IIIA	8	15.7
IIIB	14	27.5
IIIC	0	0
IV	2	3.9
Total	51	100

Table 2: Clinical TNM Staging

N =51. No single stage was significant with p >0.05.

FNAC	No. of Cases	Percentage
Malignant	42	82.4
Suspicious of carcinoma	4	7.8
Benign	5	9.8
Total	51	100

Table 3: FNAC Procedure

FNAC		Frozen Section	Excision biopsy	Final HPE as malignant
Malignant	42	0	0	42
Suspicious of malignancy	4	4		0
		Malignant	Benign	
Benign	5	3		2
		Malignant	Benign	
Total	51	7		51

Table 4: Correlation of FNAC, Frozen section, Excision biopsy and HPE

Type of Tumour	No. of Cases	Percentage
Invasive ductal carcinoma	41	80.39
Medullary carcinoma	4	7.84
Colloid carcinoma	1	1.96
Infiltrative lobular carcinoma	1	1.96
Secretory carcinoma	1	1.96
Invasive papillary	1	1.96
Comedocarcinoma	1	1.96
Ductal carcinoma in-situ	1	1.96
Paget's disease	0	0
Cystosarcoma phylloid	0	0
Others	0	0
Total	51	99.99

Table 5: Histopathology of Specimen

The incidence of invasive ductal carcinoma is significant with p<0.05.

Nodes	No. of Cases	Percentage
No metastasis	20	39.2
1-4	19	37.3
>4	12	23.5
Total	51	100

Table 6: Histopathological Nodal Involvement

No significant correlation of nodal status with p >0.05.

Receptor	ER	%	PR	%	HER-2/neu	%
Positive	17	34	19	38	8	16
Negative	33	66	31	62	42	84
Total	50	100	50	100	50	100

Table 7: ER, PR and HER-2/neu status

Treatment	No. of Cases	%
Surg + CT	12	24
Surg + CT + RT	16	32
Surg + CT + RT + HT	10	20
Surg + CT + HT	10	20
Neoadj CT + Surg + CT+RT	2	2
Neoadj CT+Surg+CT+RT+HT	1	2
Total	51	100

Table 8: Treatment

DISCUSSION

Present study was conducted to find out the incidence of breast carcinoma in our hospital with their clinical presentations, various risk factors, accuracy of FNAC and frozen section, incidence of various pathological types and nodal involvement, stage at presentation, ER, PR, HER-2/neu status.

The incidence of breast cancer in our hospital during the study period is 5.56 per 1000 patients. In our study the youngest patient is 27 years old and the oldest is 87 years. 32% of patients were between 41-50 years age group. In a study done by Saghir et al. 39.9% were between 35 and 49 and 52% were aged 50 years and above.⁴

The peak incidence of carcinoma of the breast was observed by Smith et al.⁵ in 2002 in 4th decade. The peak incidence reported by National Cancer Registry.⁶ was highest in 2nd decade and Age distribution showed two peaks at 41-50 years and 51-60 years as per Binder Chopra et al.⁷ which was nearer to our study.

In our study 63.3% of patients had their menarche before 14 years, which supports the fact that early menarche is associated with longer exposure of breast tissue to estrogen stimulation, which is comparable to study done by Soon Young Lee, et al.⁸ which is 73.33%

In our study 10.2% of patients had their first pregnancy before 20 years, which correlates well with Bernstein et al.⁹ which shows 12%. 14.3% of our patients were nulliparous as compared to 16.5% with Sara et al.¹⁰

Most breast cancers present with hard lump, which is about 84.3% cases in our series which is comparable to HJG Bloom, WW Richardson and E. J. Harries who noted lump in 83%, which is followed by pain, ulcer and nipple discharge 5.9%; 8% and 3.9% which is very close to Bloom HJG series 6%, 8% and 3% respectively.

Upper outer quadrant being more common of about 54.9% which is comparable to 53.3% in Darbre et al. series.¹¹

Surveillance, Epidemiology and End Results (SEER) Program, 9 SEER Registries, National Cancer Institute shows.¹² 80% of cases in stage I disease, which reflects early detection in Western population followed by 40% and 10% of stage II and stage III respectively, which is not comparable with our series which is 5.9%, 47%, 43.2% and 3.9% of stage I, II, II and IV respectively.

All patients in our series are subjected to FNAC in which 82.4% were diagnosed as malignant rest of 17.6% were diagnosed malignant after doing frozen section and excision biopsy.

The accuracy rate of FNAC in our series is 82.4%, which is similar to 95% of Moschetta et al.¹³ series, but the false negative cases in our study are 9.8%, which is significant as compared to the above series. Out of 7 cases 5 were diagnosed as malignant in frozen section which reflects 71.4% accuracy.

Invasive ductal carcinoma being most common histopathological variant, which constitute 80.39%.

CONCLUSION

In our present study we can conclude that a significant incidence of breast cancer in our set up is highest between fourth and fifth decade of life. Age at menarche, age at first birth, breast feeding and parity as risk factors has been proved. Lump as a main presenting complaint with involvement of left breast upper outer quadrant also been justified.

But most of our patients present at stage II and stage III which reflects lack of awareness among our population. Early detection and prompt treatment can be achieved by proper health education, increased awareness, screening by regular physical examination and mammography of the people at risk.

Emphasis should be given for proper way of self-examination of the breast and inform the physician promptly whenever abnormality is felt, as early detection and early treatment provides better results.

Even though FNAC has been established as a simple and effective method of diagnosing breast cancer, further evaluation is required to rule out carcinoma either by frozen section and excisional biopsy in false negative cases rather than leaving it alone in clinically suspicious cases.

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