International Surgery Journal
Chandrashekar S et al. Int Surg J. 2017 May;4(5):1566-1568
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: http://dx.doi.org/10.18203/2349-2902.isj20171510

Original Research Article

Axillary lymph node status, age at presentation and menopausal status in female breast cancer patients attending a government tertiary care teaching hospital in Mysore, Karnataka, India

Chandrashekar S.[1], Ajith V. L.[1]*, Ashwin Raghavendra A.[2]

[1]Department of General Surgery, Mysore Medical College and Research Institute, Mysore, Karnataka, India-570001
[2]Department of Radio Diagnosis, Mysore Medical College and Research Institute, Mysore, Karnataka, India-570001

Received: 14 March 2017
Accepted: 20 March 2017

***Correspondence:**
Dr. Ajith V. L.,
E-mail: ajitvl@gmail.com

ABSTRACT

Background: Breast cancer is now the leading cause of cancer among Indian women. This study was aimed at creating a database of female breast cancer patients with emphasis on age, menopausal and axillary lymph node metastasis.
Methods: A retrospective study was conducted among 103 female breast carcinoma patients who sought treatment in the Department of General Surgery from 2016 January to December. Various data including age at presentation, menopausal status, lymph node status, grade of the tumor, family history of breast cancer, location, size of the tumor and histopathological types were studied.
Results: Mean age of the study population was 52.7years. Of the 103 patients, 70.9% were post-menopausal. Among different clinical and pathological variables, Grade of the tumor and menopausal status were showing statistically significant association with positive axillary lymph nodal status.
Conclusions: The variables which are predictive of axillary lymph node involvement in breast cancer are tumour grade and menopausal status. The current data may be used to tailor the management protocol of patients with breast carcinoma in this region of the country.

Keywords: Age, Axillary lymph node, Breast cancer, Menopausal status

INTRODUCTION

Incidence of breast cancer is on the increase worldwide, and India is no exception. With an annual incidence of approximately 1,44,000 new cases of breast cancer in India, it has now become the most common cancer among females in urban India (Bangalore 27.5%).[1,2] The nodal status or the degree of nodal involvement is a significant prognostic indicator of survival in breast cancer. Most of the patients in India present with locally advanced disease and positive axillary nodes due to the lack of awareness, socioeconomic factors, lack of access to quality healthcare and absence of an effective screening programme.[3] Contrary to the reported western data, about 60-70% of the breast cancer patients in India present with locally advanced node positive disease. This study was aimed at creating an epidemiological database on female breast carcinoma among patients attending Krishna Rajendra Hospital, Mysore, Karnataka, India.

METHODS

This study was conducted among 103 female breast cancer patients who sought treatment in the Department of General Surgery, Mysore Medical College and Research Institute, Mysore, Karnataka, India for over a

period of one year (From 1st January 2016 to 31st December 2016). Patients data were collected retrospectively from both Medical records library and Surgery register kept in the department. Various data including age at presentation, menopausal status, lymph node status, grade of the tumor, family history of breast cancer, location, size of the tumor and histopathological types were studied. Statistical analysis was performed using SPSS 16.

RESULTS

Mean age of the study population was 52.7 years (SD-9.25). Most of the patients were in age group 50-60 years. Of the 103 patients, 70.9% were post-menopausal. Most of them belonged to low socio economic status (89%).

Table 1: General characteristics of the study population.

Variable	N	%
Age		
31-40	8	7.8
41-50	38	36.9
51-60	36	35
61-70	19	18.4
71-80	2	1.9
Menopausal status		
Pre-menopausal	30	29.1
Post-menopausal	73	70.9
Family history		
Yes	7	6.8
No	96	93.2
Tumor location		
UOQ	72	69.9
UIQ	23	22.3
LOQ	4	3.9
LIQ	4	3.9
Tumor size		
<2	17	16.5
2-5	52	50.5
>5	34	33
Nodal status		
Positive	52	50.5
Negative	51	49.5
Grade		
1	11	10.7
2	69	67
3	17	16.5
NA	6	5.8
Histological type		
IDC	98	95.1
ILC	3	2.9
NA	2	1.9

[UOQ-Upper Outer Quadrant, UIQ-Upper Inner Quadrant, LOQ-Lower Outer Quadrant, LIQ-Lower Inner Quadrant, NA-Not Available, IDC-Infiltrating Ductal Carcinoma, ILC-Invasive Lobular Carcinoma].

A majority presented with grade II disease (67%). Most of them had a tumor size between 2 and 5cm. Of the 103 patients, 52 had positive axillary lymph node status. Basic characteristics of the study population are shown in Table 1. In present study, histological results revealed that the most common ductal carcinoma was prevalent among 98 (95.1%) patients and 3 patients (2.9%) were found with lobular carcinoma.

Association between positive axillary lymph node status and other variables are shown in Table 2. Among different clinical and pathological variables, Grade of the tumor and menopausal status are showing statistically significant association with positive axillary lymph nodal status.

Table 2: Association of axillary nodal metastasis with other variables.

Variables	p-value
Menopausal status	0.026
Age	0.136
Family history	0.676
Tumor location	0.469
Tumor size	0.885
Tumor grade	0.024
Histological type	0.239

[p-value<0.05-statistically significant].

DISCUSSION

The present study was conducted among 103 female breast cancer patients treated in the Department of General Surgery, Mysore Medical College and Research Institute, Mysore, Karnataka, India.

The incidence of breast cancer has been increasing in India over the past few years and has overtaken cervical cancer in women in urban areas.[2] In this study, most of the subjects were between 40-60 years; which is in concordance with the present Indian literature. It has been reported that, in India the increase in the incidence of breast cancer has been more among women >50 years of age.[4] The incidence of breast cancer in the USA followed a similar pattern, with the greatest increase in women >50 years of age.[5] Although not well studied across populations, it is likely that many features of urbanized lifestyle are responsible for this increase.

Mean age at presentation was 52 years, similar to previous Indian studies and is a decade earlier compared to the data from West.[6] Youngest patient was of 31 years with a post-menopausal proportion of 70.9. This result is similar to that reported in West.[6]

Family history of breast cancer was present in 6.8% of the cases which is in par with that reported in western literature (5-10%).[7]

In India, larger proportions of patients have high grade tumors and positive axillary lymph nodes. In the present study 67% tumors were of grade II, and 50.5% of the patients had positive axillary lymph nodes at diagnosis. In developed countries, the majority of the patients have negative lymph nodes.[8,9] Previous Indian studies also have documented a higher proportion of positive axillary nodes at diagnosis.

The tumor location was found more commonly in the upper outer quadrant (69.9%). This was in concordance with previous studies, even though proportion of cases differ considerably among various researchers.[3] The lowest incidence was seen in the lower half of the breast, with both inner and outer quadrants showing a frequency of 3.9%.

Among various factor studied, only menopausal status and grade of the tumor showed a statistically significant association with axillary lymph node metastasis. Patient's age or tumor size were not found to be a significant factor in the development of axillary lymph node metastasis. Postaci H et al reported a close relationship between tumour size and axillary lymph node involvement.[10] According to them, the risk of axillary lymph node metastasis increases as tumour size increases. But in this study we didn't get any association between tumor size and lymph node metastasis

CONCLUSION

In conclusion, present study showed that the variables which are predictive of axillary lymph node involvement in breast cancer were tumour grade and menopausal status. The current data may be used to tailor the management protocol of patients with breast carcinoma in this region of the country.

ACKNOWLEDGEMENTS

Authors are grateful to staffs of Medical Records Library for their help in data collection.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the institutional ethics committee

REFERENCES

1. Three-year report of population based cancer registries.2012-14. Available from: http:// www.ncrpindia.org/ALL_NCRP_REPORTS/PBCR _REPORT_2012_2014/index.htm.
2. National Cancer Registry Programme: Consolidated report of the population based cancer registries.1990-1996. Indian Council of Medical Research; 2001.
3. Leong SPL, Shen ZZ, Liu TJ, Agarwal G, Tajima T, Paik N, et al. Is breast cancer the same disease in Asian and western countries? World J Surg 2010;34:2308-24.
4. Badwe RA, Gupta S. Breast cancer: an Indian perspective. Natl Med J India. 2011;24(4):193-7.
5. Ravdin PM, Cronin KA, Howlader N, Berg CD, Chlebowski RT, Feuer EJ, et al. The decrease in breast-cancer incidence in 2003 in the United States. N Engl J Med. 2007;356:1670-4.
6. SEER-Stat database. Available from: http:// seer. cancer. gov/statfacts/html/ breast.html.
7. Saxena S, Rekhi B, Bansal A. Clinico-morphological pattern of breast cancer including family history in a New Delhi hospital, India- a cross sectional study. World J Surg Oncol. 2005;3:67.
8. Stead LA, Lash TL, Sobieraj JE. Triple negative breast cancer are increased in black women regardless of age or BMI. Breast Cancer Res. 2009;11:R18.
9. Taucher S, Rudas M, Mader RM. Do we need Her-2/neu testing for all patients with primary breast carcinoma? Cancer. 2003;98:2547-53.
10. Postacı H, Zengel B, Yararbaş U, Uslu A, Eliyatkın N, Akpınar G, et al. Sentinel lymph node biopsy in breast cancer: predictors of axillary and non-sentinel lymph node involvement. Balkan Med J. 2013;30:415-21.

Cite this article as: Chandrashekar S, Ajith VL, Raghavendra AA. Axillary lymph node status, age at presentation and menopausal status in female breast cancer patients attending a government tertiary care teaching hospital in Mysore, Karnataka, India. Int Surg J 2017;4:1566-8.