

Epidemiology of Breast Cancer at Tertiary Care Hospital in Rural Maharashtra: An Observational Study

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Abstract

Background: Breast cancer is an important health problem in India. It is among the most common types of malignant cancers in women. There is a need to observe and analyze the clinical data from various regions in India so as to know the epidemiological details related to the problem which may help in designing better prevention and management strategies. Present study describes the epidemiology of Breast cancer patients visiting SRT Rural Medical College & Hospital (GMCH), Ambajogai in Beed district of Maharashtra. **Methods:** Total number of cancer patients visiting the surgical ward was recorded and proportion of breast cancer cases was found. This is a study of 66 breast cancer patients who had visited SRTR Medical College & Hospital (GMCH), Ambajogai for treatment during the period of January 1994 to December 1998. Age and sex distribution of the cases was described. Obstetric & menstrual history was taken in females and cases were described in relation to parity, age at the time of first live issue, menstrual status. **Results & Conclusions:** Total of 309 cases of cancer visited the hospital. 66 (21.4%) of these were breast cancer patients. Observations show that in our study maximum numbers of cases have occurred in 5th and 7th decades of life. The study comprised of 2 males and 64 females. Male to female ratio is 1:32. Nulliparous women comprised 4.9 % cases, 50% cases had 3 or less children while 45.3% of the cases had 4 or more children. Age at the time of first live issue was 15 years or less in 24.6% cases, 16 to 20 years in 75.4% cases while there was not a single case with age more than 20 years at the time of first live issue. Premenopausal women comprised 26.6 % cases, 28.1% cases were peri-menopausal women while 45.3% of the cases were postmenopausal women. Present study gives valuable information regarding the epidemiology of breast cancer patients from the region.

Keywords: Carcinoma breast, Menopause, Parity

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cancer are diagnosed in late stages in India.² There is a need to observe and analyze the clinical data from various regions in India so as to know the epidemiological details related to the problem which may help in designing better prevention and management strategies. Present study describes the epidemiology of Breast cancer patients visiting SRTR Medical College and Hospital (GMCH), Ambajogai in Beed district of Maharashtra which is a well known rural tertiary referral centre.

METHODS

Total number of cancer patients visiting the surgical ward was recorded and proportion of breast cancer cases was found. This is a study of 66 breast cancer patients who had visited SRTR Medical College and Hospital (GMCH), Ambajogai for treatment during the period of January 1994 to December 1998. Age and sex distribution

INTRODUCTION

One in ten of all new cancers diagnosed worldwide each year are carcinomas of the female breast, and it is principle cause of death from cancer among women globally.¹ Due to lack of awareness on early detection and barriers to health services, most women with breast

of the cases was described. Obstetric and menstrual history was taken in females and cases were described in relation to parity, age at the time of first live issue, menstrual status. Informed consent was taken from all the participants in the study. After collecting the preliminary data like name, age, sex, a thorough history was taken in each case. All the patients had biopsy proved carcinomas. A thorough general and systematic examination was carried out for each patient.

OBSERVATIONS

Total number of cancer patients visiting the surgical ward was 309 and proportion of breast cancer cases was found to be 21.35%. Table 1 shows the proportion of breast cancer patients in relation to other malignancies. Out of 66 cases of breast cancer, only 2 cases were male patients with a male: female ratio for breast cancer at 1: 32.

Table 1: Proportion of breast cancer patients in relation to other malignancies

Site	Number of cases	Percentage
Salivary glands	5	1.62
Oesophagus	5	1.62
Stomach	21	6.8
Small Intestine	1	0.32
Rectum and Anal Canal	14	4.53
Liver	12	3.88
Gall Bladder	3	0.97
Pancreas	6	1.94
Soft Tissue Tumours	5	1.62
Skin Melanoma	5	1.62
Skin and Others	15	4.85
Female Breast	64	20.71
Male Breast	2	0.65
Penis	31	10.03
Urinary Bladder	2	0.65
Kidney	7	2.27
Thyroid Gland	3	0.97
Secondary in neck from unknown source	1	0.32
Lymphoma	7	2.27
Cervix	73	23.62
Others	27	8.74
Total	309	100

Table 2: Age Distribution of Patients with Breast Cancers

Age in Years	No. of Cases	Percentage
20-29	0	0
30-39	4	6.1
40-49	24	36.4
50-59	15	22.7
60-69	21	31.8
70 and above	2	3
Total	66	100

Table 3: Breast Cancer Patients in relation to Parity

Parity	Cases	Percentage
Nulliparous	3	4.69
3 or less children	32	50
4 or more children	29	45.31
Total	64	100

Table 4: Breast Cancer Patients in relation to Age at the time of first Issue

Age (years)	Cases	Percentage
15 or less	15	24.6
16 to 20	46	75.4
More than 20	0	0
Total	61	100

Table 5: Breast Cancer Patients in relation to menstrual status

Menstrual status	Cases	Percentage
Premenopausal	17	26.56
Peri-menopausal	18	28.13
Postmenopausal	29	45.31
Total	64	100

DISCUSSION

Observations in Table 1 show that in our study the total number of cancer patients visiting the surgical ward was 309 and proportion of breast cancer cases was found to be 21.35%. In the series published by Gupta JC *et al*³, proportion of breast cancer cases among the total number of cancer patients was found to be 8.22%. Similar to our results, study by Haque A *et al*⁴ reported proportion of breast cancer cases among the total number of cancer patients to be 22.7%. In our study, out of 66 cases of breast cancer, only 2 cases (3%) were male patients with a male: female ratio for breast cancer at 1: 32. The results are in line with that reported in literature.^{5,6} The maximum number of breast cancer patients were found in age groups from 30 to 69 years with peak in the 5th decade of life. In our study, Nulliparous women comprised 4.9 % cases, 50% cases had 3 or less children while 45.3% of the cases had 4 or more children. In the study of 303 cases from Kerala done by Ashley Ann Varughese *et al*¹ there were 7% cases with nulliparity. It has been reported that Nulliparous women had a 2.2-fold higher risk of breast cancer than parous women. Three or more pregnancies were associated with a 40-50% reduction in risk.^{7,8} Majority of the patients in our study were postmenopausal. The results are in line with the study done by Ashley Ann Varughese *et al*¹ in Kerala, India. The strength of our study is a relatively longer duration of study spanning five years included in analysis. The study has its limitations which include an observational and descriptive study design. Also, the sample size is relatively small. However it gives valuable information regarding the epidemiology of Breast cancer

patients from rural Marathwada region of Maharashtra. Further research needs to be done to better understand the epidemiology of breast cancer which may help in designing better management strategies towards the problem.

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