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Research Article

Profile of breast cancer patients attending a tertiary care centre: a cross-sectional study

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ABSTRACT

Background: Cancer is the leading cause of death in developed countries and the second leading cause of death in developing countries. In India around 555,000 people died of cancer in the year 2010. In India the average age of the high risk group in India is 43-46 years unlike in the west where women aged 53-57 years are more prone to breast cancer. The objectives of the study were to study the socio-demographic profile of Breast cancer patients attending tertiary care centre and to study the type, site and at what stage Breast cancers are being reported.
Methods: Hospital based Cross-Sectional Study, Carried out over a period of one year from November 2013 to October 2014. After obtaining the written informed consent from the patients, they will be enrolled in the study. A detailed pre-designed & pre-tested proforma is used to collect information on socio-demographic profile. All diagnosed Breast cancer patients are included in the study.
Results: Total of the 81 Breast cancer patients, 97.5% were female and 2.5% Male. And 58.01% were in the age group of 40-60yrs, 43.2% were graduates by education, 49.4% were housewives. 86.4% belonged to upper and upper middle class (class I and class II of BG Prasad's). 8.6% shows positive family history. 67.9% were presents as Lump in the breast. 39.5%were more than one month duration of symptoms. 72.8% were left sided breast cancer. 90.1% were infiltrative ductal cancer. 33.3% were in cancer stage II.
Conclusions: The age for breast carcinoma was more in fifth and sixth decade of life in our Patients. Lump was the most dominant clinical presentation where majority of the patients were in cancer stage II.

Keywords: Breast cancer, Ductal carcinoma, ANOVA test

INTRODUCTION

Cancer is the leading cause of death in developed countries and the second leading cause of death in developing countries.[1] In India around 555,000 people died of cancer in the year 2010.[2] In India the average age of the high risk group in India is 43-46 years unlike in the west where women aged 53-57 years are more prone to breast cancer.[3]

Breast cancer is a global disease. Though the majority of underlying causes and other features are usually uniform around the world, every region has its own uniqueness for that cancer.[4]

The breast is made up of glands called lobules that can make milk and thin tubes called ducts that carry the milk from the lobules to the nipple. Breast tissue also contains fat and connective tissue, lymph nodes, and blood vessels.[5]

The most common type of breast cancer is ductal carcinoma, which begins in the cells of the ducts. Breast cancer can also begin in the cells of the lobules and in other tissues in the breast.[6] Invasive breast cancer is

breast cancer that has spread from where it began in the ducts or lobules to surrounding tissue.[7]

In the U.S., breast cancer is the second most common cancer in women after skin cancer.[8] It can occur in both men and women, but it is very rare in men. Each year there are about 2,300 new cases of breast cancer in men and about 230,000 new cases in women.[7]

Age shift (More young ladies affected). An increasing numbers of patients are in the 25 to 40 years of age, rising numbers of cases of breast cancer in India, breast cancer accounts for 25% to 32% of all female cancers in all major cities.[9]

The 5-year relative survival rate is lower among women diagnosed with breast cancer before age 40 (85%) compared to women diagnosed at 40 years of age or older (90%). This may be due to tumors diagnosed at younger ages being more aggressive and/or less responsive to treatment.[10]

Late presentation (This directly decreases long term survival of the patient) the overall 5 year survival for breast cancer has increased from 75% in 1970's to almost 89% presently.[11]

Lack of awareness and screening (screening is the single most important factor responsible for better survival of patients in the west). The most important reason being lack of awareness about breast cancer and screening of the same; more than 50% patients of breast cancer present in stages 3 and 4, and outcome is not as good as earlier stages.[12]

Aggressive cancers in young (generally, the younger the age below menopause, the more aggressive the cancer).[13]

METHODS

Hospital based cross-sectional study, carried out over a period of one year from November 2013 to October 2014. A total of 81 breast cancer patients admitted in different surgical and medical wards of a tertiary care centre in Dharwad, were taken up for study.

The relevant data was collected related to socio-demographic profile, and associated risk factors with a pretested and validated structured format. Information regarding socio-demographic details, like age, sex, religion, marital status, socio-economic status, education, occupation, residence and associated risk factors like family history, were recorded. Socio-economic status was evaluated by using the modified BG Prasad classification. Institutional Ethical clearance was obtained from the research and ethical committee for data collection. Data was entered in MS Excel and analyzed by using percentage and proportion.

RESULTS

Total of the 81 Breast cancer patients, 97.5% were female and 2.5% Male. And large proportion of the patients 58.01%were found to be in the age group of 40-60yrs The youngest patient was 20 and the oldest was 75 years old, 43.2% were graduate by education, 49.4% were housewives, 82.7% were married. 86.4% belonged to upper and upper middle class (class I and class II of BG Prasad's) (Table 1).

Table 1: Socio-demographic profile of Breast cancer patients.

		Frequency	%
Age	20 – 30	4	4.9
	30 – 40	17	21.0
	40 – 50	22	27.2
	50 – 60	25	30.9
	>60	13	16.0
	Total	81	100.0
Sex	Male	2	2.5
	Female	79	97.5
	Total	81	100
Education	Illiterate	19	23.5
	Primary school	7	8.6
	High school	13	16.0
	Graduate	35	43.2
	Post-graduate	7	8.6
	Total	81	100.0
Occupation	Un-employed	7	8.6
	Agri-culturist	14	17.3
	Labourer	6	7.4
	House wife	40	49.4
	Others	14	17.3
	Total	81	100.0
Socio economic classification (according to BG Prasad)	Class I	21	25.9
	Class II	49	60.5
	Class III	4	4.9
	Class IV	6	7.4
	Class V	1	1.2
	Total	81	100.0
Religion	Hindu	67	82.7
	Muslim	7	8.6
	Others	7	8.6
	Total	81	100.0
Marital	Married	67	82.7
	Unmarried	14	17.3
	Divorced / Widow	0	0
	Total	81	100.0

Table 2: ANOVA to compare age of diagnosis of breast cancer with stage of presentation of breast cancer.

		Sum of Squares	df	Mean Square	F	Sig.
Age	Between groups	230.757	3	76.919	0.508	0.678
	Within groups	11656.798	77	151.387		
	Total	11887.556	80			

ANOVA test applied to compare Age of diagnosis of breast cancer with stage of presentation does not show any significant association between the two. (p=0.742,df=3,77,F=0.417)

Table 3: Type, site and stages Breast cancers.

		Frequency	%
Lump size on clinical examination	<1cm	11	13.6
	1-2cm	30	37.0
	2-5cm	20	24.7
	>5	20	24.7
	Total	81	100.0
Side of breast affected	Left	59	72.8
	Right	20	24.7
	B/L	2	2.5
	Total	81	100.0
Duration of symptoms	< 1month	28	34.6
	1month to 1 year	32	39.5
	> 1year	21	25.9
	Total	81	100.0
Family history	Positive family history	7	8.6
	Absent	74	91.4
	Total	81	100.0
Pathological investigation	FNAC	61	75.3
	Trucut	7	8.6
	Excision	13	16.0
	Total	81	100.0
Histological variant	Infiltrative Ductal cancer	73	90.1
	Lobular	2	2.5
	Insitu malignancy	3	3.7
	Mixed	3	3.7
	Total	81	100.0
Management of patients	Surgery	67	82.7
	Conservative	14	17.3
	Total	81	100.0
Type of surgery	MRM	47	70.2
	Others	20	29.8
	Total	67	100.0
Stage of cancer	Stage I T0N0M0	21	25.9
	Stage II Stage 2A: T0N1M0, T1N1M0, T2N0M0 Stage 2B: T2N1M0, T3N0M0	27	33.3
	Stage III Stage 3A: T2N2M0, T3N1M0, T3N2M0 Stage 3B: T4 any NM0, Any T N3M0	14	17.3
	Stage VI: Any T any N M1	19	23.5
	Total	81	100.0

ANOVA test applied to compare Age of diagnosis of breast cancer with stage of presentation does not show any significant association between the two. (p=0.742, df=3, 77, F=0.417) (Table 2). In almost all patients presenting complaint was breast lump. Only few patients presented with nipple discharge and 37% of patients were found to have 1-2 cm size breast lump (Table 3).

On clinical examination, size of breast lump varied from 1-10cms most of them were at the size of 1-2cm, patients who presented with a lump in the breast; 59 (72.8%) patients had a lump in the Left breast and 20 (24.7%) cases had it in the Right breast. Two cases (2.5%) had lumps in both breasts (Table 3). Among diagnostic pathological examination 75.3% cases were diagnosed by FNAC. 8.6% were diagnosed by Trucut biopsy. Rest 16.0% underwent lumpectomy/Excision and others methods. 73 (90.1%) patients had Infiltrative ductal carcinoma, 2 (2.5%) had invasive lobular carcinoma, 3(3.7) patient had mixed ductal and lobular pattern (Table 3).

Of 67 patients who underwent surgical modality of treatment, 47 underwent modified radical mastectomy and others undergone different modalities of surgery. Pathological tumor, node, and metastasis (TNM) staging showed most common group was stage II (33.3%).

DISCUSSION

In India, the strategies for prevention of breast cancer are required as breast cancer incidence is increasing among women in many regions. The average age of the patient presentation is between 40 and 60 years in present study. The peak age of breast cancer is 60-70 years in western countries and 40-50 years in Asian countries.[14] In present study, nearly 53.1% were below 50 years of age, while 31.69% cases observed in the study by Nigam et al.[15]

Majority of patients 82.7% are married in present study, similar finding was seen in study done by Kaur N et al.[16] In present study 49.4% were housewives a study done by Kaur N et al. shows that 85% were housewives.[16]

Present study 8.6% of patients shows positive family history, similar study done by Bodh k et al showed 5.1%.[17] Lump in the breast was the chief presenting complaint in a majority of the patients (74.1%), as reported in study done by Sandhu DS et al.[18]

In our study 73 (90.1%) patients had Infiltrative ductal carcinoma, 2 (2.5%) had invasive lobular carcinoma, 3 (3.7) patient had mixed ductal and lobular pattern. A study done by Vidhyasagar et al shows that 54 (90%) patients had Invasive ductal carcinoma, 4 (6.67%) had invasive lobular carcinoma. Only 1 patient had ductal carcinoma insitu.[19] In our study out of 67 patients who underwent surgical modality of treatment 47 patients underwent classical MRM similar find 80.6% was seen in study by Sandhu, et al.[18]

In present study majority of them are presenting in stage 2 of cancer 33.3% a study done by hashim et al. shows stage 3.[20]

CONCLUSION

The mean age of presentation for breast carcinoma is a decade earlier in our patients compared to patients from the west. The incidence of breast cancer in India is increasing and basic education and awareness of the women's health, self-breast examination, and clinical breast examination may help increasing awareness and help to identify breast cancer at early stage in developing countries.

Recommendations

Majority of patients were reporting in stage II Cancer so health education regarding early diagnosis and treatment are recommended. Clinicians should elicit family histories and counsel about health-related behaviour's and breast cancer risk

Limitation

This study is hospital based study so cannot generalize to population. Few risk factors like menopausal status, duration of breast feed and Hormonal status of patients were not evaluated so further detail study is recommended.

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