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Study on stage of breast carcinoma at the time of hospitalisation

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Abstract

Background: The aim of this study is to know that at what stage the breast cancer patient visit to the surgeon and to improve our understanding on why women delay their presentation with breast cancer. In the present study we have included age group of the patient, average size of tumour, stage of breast cancer, average duration of the disease, family history and associated factors in the presentation of breast cancer.

Background: To know the stage of carcinoma breast at the time of first presentation to the surgeon, this study was conducted in the breast cancer patients admitted in Rajah Muthiah Medical College, Department of General Surgery from 01.10.2019 to 30.09.2021.

Method: All the patients admitted with carcinoma breast in Department Of Surgery, Rajah Muthiah Medical College were studied, history was recorded regarding onset of the symptom, age and marital status were recorded. Patients were examined for tumour size, TNM staging and pathological diagnosis were recorded for the study.

Result: Out of 88 breast cancer patients, only 24% visited the surgeon within 3 month of symptoms. The study shows that 28.4% were of stage 2a, rest of them belonged to higher stage.

Conclusion: Significant number of patients who were admitted to the hospital for management of the carcinoma breast was of advanced stage. This warrants the need of creating awareness among the society especially by the government and medical institutions to achieve the goal of early detection of breast carcinoma for its better treatment.

Keywords: Breast cancer, locally advanced breast cancer.

Introduction

World-wide breast cancer is the most frequently diagnosed cancer accounting for 23% of total cancer cases and leading cause of cancer death among females accounting for 14% of cancer death [1]. In India it is the most common cancer among women being second to carcinoma cervix in other registries [2]. The peak incidence of breast cancer in India is in the 45-49 years of age group with the incidence of breast cancer ranging from a mere 1% in Dibrugarh to peak of 22.3% in Thiruvananthapuram [2]. Taken together these two diagnosed at an advanced stage of breast cancer during the most productive phase of their lives. It has been proven that patient with longer duration of symptoms present with more advanced stage of disease and that a delay in diagnosis between 3-6 months after onset of symptoms reduce 5 year survival by 7%compared to patients diagnosed with in 3 month of onset of symptom [3,4].

As a result of breast screening, early diagnosis and better treatment in the western population there has been fall in the death caused by breast cancer although the relative contribution of these factors is yet to be evaluated [5].

In India due to lack of screening programme and delay in diagnosis is hindering the attempts to improve breast cancer survival. Significant gain can be made by encouraging women who delay presenting to seek help more quickly and improving hospital practise. This paper aims to understand factors that influence diagnostic delay and develop strategies to reduce it.

Methods

In this study we included the 88 patients of carcinoma breast who were admitted in department of Surgery, Rajah Muthiah medical college, Chidambaram during 24 months period from 01/10/2019 to 30/09/2021.The history of all 88 patients were recorded regarding age of patients, marital status, personal history, family history, time period between noticing first symptom and final diagnosis, site of breast cancer, site and quadrant of breast involved, clinical stage of the disease, type of breast cancer/tumour characteristics.

Family history was defined as breast cancer in first degree relatives. Patients were split into two groups based on the time taken between noticing symptoms and diagnosis into < 12 weeks and > 12 weeks. This was done because delay more than 12 weeks has shown to result in advanced disease and worse prognosis [3,4]. Staging was based on AJCC cancer manual[6].Tumour were considered to be early stage if they were of stage 1a,1b,2a,2b and locally advanced stage if it was stage 3a,3b, 3c.Metastatic if was of stage 4 as per TNM staging guidelines[1]. Age wise distribution of disease from 25 to 35 years, 36 to 45years, 46 to 55 years, 56 to 65 years, and more than 66 years were done in this study.

Observations Tables

Table 1: Age factor

Age (in years)	No. Of patients	% of patients
25-35	10	11.36
36-45	30	34.00
46-55	22	25.00
56-65	20	22.72
66-75	06	6.80

Table 2: Regional distribution.

Region	No.of patients	% of patients
Rural	46	52.28
Urban	42	47.72

Table 3: Religion distribution.

Religion	No. Of patients	% of patients
Hindu	73	82.95
Muslim	14	15.90
Christian	1	1.13

Table 4: Quadrant involved.

Quadrant invoived	No. of patients	% of patients
Upper outer	38	43.18
Upper inner	16	18.18
Central	14	15.90
Lower outer	09	10.22
Lower inner	02	2.27
Multiple quadrant	09	10.22

Table 5: Site involved.

Site involved	No. of patients	% of patients
Right	42	47.72
Left	43	48.86
Bilateral	03	3.40

Table 6: Histological presentation of patients.

	No. of Patients	% of Patients
Duct cell carcinoma	71	65.33
Inflammatory carcinoma duc cell	13	14.77
Invasive duct cell carcinoma gr-2	01	1.13
Recurrent duct cell carcinoma	01	1.13
Locally advanced carcinoma breast cell	02	2.27

Table 7: site of metastasis.

Site of metastasis	No. Of patients	% of patients
Hepatic	03	3.40
Pulmonary	03	3.40
Cerebral	01	1.13

Table 8: duration of patients presents to clinician.

Time since symptom	No. Of patients	% of patients
< 12 weeks	21	23.86
>12 weeks	67	76.13

Table 9: clinical finings

Finding	No. Of patients	% of patients
Lump	37	42
Pain in lump	51	57
Skin fix	14	15.90
Skin ulcer	04	4.50
Nodules	01	1.13
Peu-d-orange	06	6.68
Nipple retracted	18	20.45
Nipple areola complex invoved	02	2.27
Nipple areola complex destroyed	02	2.27
Fix to chest wall	01	1.13
Fix to skin & chest	01	1.13
Whole breast lost	01	1.13
Fungation	01	1.13

Table 10: Size of lump.

Size of lump	No. Of patients	% of patients
< 2CM	01	1.13
2-5CM	55	62
>5CM	32	36.33

Table 11: Past history of any operation.

Assocated surgery	No. of patient	% of patients
Laparoscopic sterilization	17	19.31
Total abdominal hysterectomy	05	5.68
Lower segment cessarian section	04	4.54
Opposite breasr mrm	03	3.40
Same breast mrm	01	1.13

Table 12: Associated disease of patients.

Associated disease	No. of patients	% of patients
Diabetes mellitus	11	12.50
Hypertension	11	12.50
Hepatitis- b	03	03.40
Hypothyroidism	03	03.40
Coronary artery disease	03	03.40
Intracranial space occupying leison	01	1.13
Post-partum generalised tonic-clonic seizure	01	1.13

Table 13: staging of patients

Stage of patients	No. of patients	% of patients
Stage 0	Nil	Nil
Stage 1a/1b	Nil	Nil
Stage 2a	25	28.40
Stage 2b	20	22.72
Stage 3a	13	14.77
Stage 3b	24	27.27
Stage 3c	Nil	Nil
Stage 4	06	6.80
Early Stage[1a, 1b, 2a, 2b]	45	51.13
Locally Advanced Stage[3a, 3b, 3c, 4]	43	48.86

Result

Out of 88 patients who were included in the study,45 [51.13%] of them were in early stage and 43 [48.86%] were of advanced stage breast cancer. Table 1 lists the demographic profile of present study patients. 34.09% patients were in the 36 to 45 years of age group. All patients were married. Right breast was involved in 47.72% patients, 48.86%patients were having left breast involvement and only 3.4% patients were having bilateral breast involvement. In present study the quadrant involvement was as follow: Upper outer quadrant-43.18%, upper inner quadrant- 18.18%, central quadrant-15.90%, lower outer quadrant- 10.52%, multiple quadrants - 10.25% and lower inner quadrant-2.2% of cases.

Histological study of these patients revealed 65.33% patients (71 patients) had duct cell carcinoma,14.77% (13 patients) inflammatory duct cell carcinoma,1.13% (1 patient) invasive duct cell carcinoma grade-II.1.13% (1 patient) recurrent duct cell carcinoma and 2.27% patients were having locally advanced carcinoma. In this study 3.40%patients (3 patients) were having hepatic metastasis, 3.40% (3 patients) pulmonary metastasis and 1.13% (1 patient) were having cerebral metastasis.

Only 23.86% the patients presented to the hospital within 12 weeks of noticing the problem while 76.73% patients presented to the hospital after 12weeks.The most

common reason for this delayed presentation of the patients to the surgeon was ignorance regarding the disease as patients were having no significant symptoms causing disturbance in their routine day to day activity. The size of tumour was <2 cm in one patient, 2- 5cm in 55 patients and >5 cm in 32 patients.

It is to be noted that only 42% of patients visited to the clinician with lump and 51% of patients visited to the clinician after pain develops in the lump. In the present study 15.90% of patients were had skin fixation,1.13% of patients with fixation to chest wall,1.13% of patients with lump fixed to skin and chest wall. 4.5% patients had skin ulcers,1.13% patients presented with skin nodules, 20.45% patients presented with nipple retraction, 2.27% of patients presented with involvement of nipple areolar complex, 2.27% of patients presented with destruction of nipple areolar complex,1.13% of patient with fungating mass and 1.13% of patients presented to clinician when whole breast was almost lost by the disease.

In present study71.59% (63 patients) were having co-morbidities like - diabetes mellitus in 12.50% (11 patients), hypertension in 12.50% (11 patients), hypothyroidism i n3.40%(3 patients), hepatitis-B in 3.40% (3 patients), coronary artery disease in3.40% (3 patients), history of postpartum general tonic and clonic seizures in1.13% (1 patient) and intracranial space occupying lesion in1.13%(1 patient). In our study 19.31% patients had past history of laparoscopic sterilisation, 5.68% of patients had history of total abdominal hysterectomy, 4.54% of patients with lower segment cessarian section, 3.40% of patients with opposite breast modified radical mastectomy, and 1.13% of patients had history of modified radical mastectomy on same breast. Table 4 represents the stage of disease at which patients came to the surgeons for hospitalisation.

Majority of patients presented at 2a stage around 28.4% i.e,25 patients out of 88, 24 patients (27.27%) presented at 3b stage, 20(22.74%) patients presented at 2b stage,13 patients (14.77%) at 3a stage, 6 patients (6.81%) at 4th stage. None of the patients presented at stage 0,1a,1b and 3c. 45 patients (52.13%) presented in early stage (1a, 1b, 2a, 2b) and 43 patients (48.86%) presented to hospital for treatment with advanced stage of the disease.

Discussion

In present study 48.86% of patients presented with advanced breast cancer, comparable to statistics elsewhere in India and the most commonly involved age group was between 36 to 45 years of age with 70.45% of patients up to the age of 55 years, which is again comparable to statistics provided by national cancer registries programme in India[2,7,8]. On the other hand in the west, peak incidence is in the 55 to 64 years age group with median age of 61 years[7]

All of our patients belongs to one of three major religions -Hindu, Muslim and Christian. Hindus constituted 82.95% of the study group, Muslims-15.90% and Christians were1.13%.

Rural patients were 52.28% and urban were 47.72%, so there is no remarkable difference between rural and urban distribution.

Delay of more than 12 weeks time in consulting the Surgeon for treatment after noticing lump in breast was more likely to result in advanced stage of breast cancer, 76.13% of patients fall in the delayed group. Those patients presenting 12 weeks after noticing the disease were suffering from advanced stage of the disease. When we analysed the causal factors for the delay, we found that most of these patients were ignorant about breast cancer symptoms. Many of them were embarrassed to seek help or felt afraid of being labelled as a cancer

patient hence some of them preferred to undergo alternative therapies like homeopathy, Ayurveda and local treatment eventually presenting with advanced stage of breast cancer. Low socio- economic group people feared expenses and loss of income due to morbidities.

In this study 48.86% had involvement of left side and 47.92% on right side. The quadrants involved were upper outer-43.18% and upper inner18.18% hence the involvement of upper quadrant of breast was 61.36% .

Current study has highlighted an acute knowledge gap that exist in the population regarding awareness of breast cancer and relevance of breast self-examination and this is a common observation present in many studies done elsewhere[9,10]. This needs to be corrected with proactive steps taken by health system and media to bring out scientific information into public domain so that patient do not rely on hearsay about medical information. Moreover, establishment of breast cancer support groups in the community will helps patients in overcoming there fear and doubt regarding treatment and rehabilitation. These actions would go a long way in reducing the time gap between noticing symptoms and diagnosis which is currently more than twelve weeks in most of our patients i.e. 76.13%.

Hence there is a need for screening programmes to pick up breast cancer at early stage, as it has been shown that early diagnosis leads to better survival in breast cancer.[5,11,12]

Conclusion

Thus, from the above study we conclude that proper patients' education regarding the disease of breast cancer, importance of breast self- examination and inclusion of screening practises are of utmost importance for early detection and treatment of breast cancer and there is an urgent need to bridge the knowledge attitude and practice gap in the community to win this fight against breast cancer.

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