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FACTORS ASSOCIATED WITH DELAY IN DIAGNOSIS AFTER SELF DETECTION OF BREAST LUMP AMONG PATIENTS OF BREAST CANCER

Oncology

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ABSTRACT

Breast cancer diagnosed at an advanced stage has poorer prognosis than those diagnosed earlier. In many patients, there is a significant delay between self detection of breast lump and diagnosis of breast cancer. This delay is a major cause of upstaging of the cancer. Aim of this study is to delineate the causes of delay in diagnosis in patients of carcinoma breast, attending radiotherapy department of a tertiary hospital in one year. History sheets of the breast cancer patients were retrospectively analysed, and causes of delay of more than three months between self detection of lump and diagnosis were delineated. Most important cause for this delay was using alternative medicine. Other important causes were, fear of being diagnosed with cancer, lack of knowledge regarding cancer etc. The mean duration of delay was also significantly greater in case of using alternative medicines, than other causes.

KEYWORDS

Breast cancer, Prognosis, Delay in diagnosis

INTRODUCTION

Breast cancer accounts for 11.6% of incidence of all cancers, worldwide. In 2018, the total incidence of breast cancer worldwide was around 2.089 million, just after the incidence of lung cancer (2.094 million). Among females breast cancer is the most common cancer, accounting for 24.2% of all cancer incidences per year, worldwide.[1] Among Indian women, breast cancer is the commonest cancer.[2,3] In 2018, 1,62,468 new cases of breast cancer and 87,090 deaths because of the same were reported in India.[4] Among the prognostic factors of breast cancer, tumour size and axillary nodal status are most important. Tumor size (T-stage) is a powerful predictor of future behaviour of breast cancer.[5-10] Axillary nodal status (N-stage) has been repeatedly shown as the most important prognostic factors for disease free survival and overall survival.[11-14] These T-stage and N-stage during diagnosis depends highly on the time period between onset of symptoms (mainly breast lump) and initiation of treatment after diagnosis. There are multiple factors causing delay to seek medical opinion after self detection of breast lump, e.g. fear of being diagnosed with cancer, seeking help of alternate medicine, fear of disease spread because of performing biopsy for diagnosis, lack of knowledge regarding symptoms and course of cancer, lack of

assistance from accompanying persons etc. There have been various research works finding the cause of delay in diagnosis and treatment of breast cancer patients.[15-22] This interest has undoubtedly grown because of the knowledge that the earlier a woman is diagnosed with breast cancer, the better chance of five year survival she has.[23,24] Since, maximum patients self discover their breast lump, patient related intervals of delay have received main attention.[25-27] In this study, history sheets of patients of Carcinoma breast, attending the Dept. of radiotherapy, of a tertiary hospital of West Bengal, India, during a period of one year were retrospectively analysed to delineate the important causal factors of delay in diagnosis of breast cancer.

METHOD

History sheets of the patients of carcinoma breast, attending the department of radiotherapy of a tertiary health care centre of West Bengal, India, from October 2018 to September 2019 were retrospectively analysed. The patients, with a delay of more than 3 months from self detection of breast lump to diagnosis of breast cancer were sorted. Causal factors for the delay were analysed from the detailed history sheets and by telephonic conversation with the patients or their relatives. Statistical analysis was

done in Microsoft excel. ANOVA was done to compare mean delays because of different causal factors.

RESULTS

A total number of 382 new patients of breast cancer attended the department of radiotherapy of the tertiary health care centre during an interval of one year (from October 2018 to September 2019). Among them total 138 (36.13%) patients had a delay of more than 3 months, from self identification of lump in breast to diagnosis of breast cancer (Fig. 1).
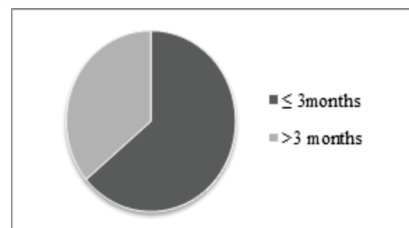

Fig. 1 – Proportion of patients with delay of more than three months

By detailed study of the history sheets and telephonic conversation with those patients or their relatives, different causal factors were revealed behind the delay. The most important factor came out to be seeking help of alternative medicines.

Out of 138 patients, 37 (26.81%) patients went for alternative medicines, 26 (18.84%) patients had a fear of being diagnosed with cancer, 25 (18.12%) patients did not have proper knowledge regarding symptoms and course of cancer. Whereas, fear of disease spread because of biopsy procedure was responsible for delay in 23 (16.67%) patients, lack of assistance from accompanying persons was responsible for delay in 20 (14.49%) cases. Other minor causes were responsible for rest 7 (5.07%) patients (Fig. 2).
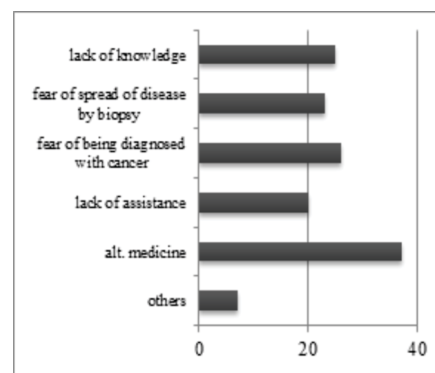

Fig. 2 – Distribution of causal factors behind delay of more than 3months

While considering the amount of delay, use of alternative medicines causes the maximum delay. The amounts of delay caused by the other factors are very much comparable (Table 1).

The mean delay of the patients, who went for alternative medicinal help, was (5.65± 0.22) months, which is significantly greater than the mean delays due to other factors (**p-value= 0.0058**) (ANOVA F = 3.45,where, F crit = 2.28).

Table 1. Average months of delay due to different cause

Groups	Count	Average months of delay	Std. error
Lack of knowledge	25	4.92	0.21
Alternative Medicine	37	5.65	0.22
Lack of assistance	20	4.83	0.27
Fear of being diagnosed with cancer	26	4.81	0.17
Fear of spread of disease by biopsy	23	4.61	0.19
Others	7	4.79	0.38

DISCUSSION

It is well known that cancer diagnosed at an advanced stage has poorer prognosis and higher mortality rate, than those diagnosed at an early stage.[28,29] Though there may be delay in various steps, like diagnosis, decision making, treatment initiation etc., the delay from initial symptom to diagnosis is one of the major determinants of prognosis. There are multiple causal factors, which can cause the delay in diagnosis of breast cancer patients, like, fear of being diagnosed with cancer, seeking help of alternative medicine, fear of disease spread because of performing biopsy for diagnosis, lack of knowledge regarding symptoms and course of cancer, lack of assistance from

accompanying persons etc. Seeking help of alternative medicine has become increasingly popular especially among cancer patients.[30] Breast cancer, is a serious, stressful life threatening condition. It is assumed that the diagnosis of cancer induces far greater mental agony than many other diseases regardless of prognosis.[31] Therefore, many patients, after self detection of breast lump, seeks alternative medicinal care, and avoids proper diagnosis, because of immense fear of being diagnosed to have cancer. The portion of delay to treatment, between when they first detect a symptom of breast cancer and when they first obtain medical attention, has been described by

Olesen *et al*, as patient interval.[32] Lack of knowledge regarding cancer symptoms, course and prognosis is one of the major factors contributing to this delay in developing countries. Very often a symptom, suggestive of cancer is reported late to the clinician.[33]

In our study, the most important factor, contributing to the delay of breast cancer diagnosis came out to be the alternative medicine seeking tendency in many patients. Among the patients with delay of more than three months from self identification of symptoms to diagnosis, 26.81% patients went for alternative medicine. Other important causes behind this delay were, fear of being diagnosed with cancer (18.84%), and lack of adequate knowledge of symptoms, course

and prognosis of breast cancer (18.12%). Causes of delay in some of the patients were fear of disease spread due to biopsy (16.67%), lack of assistance from accompanying persons (14.49%) and other minor causes. While considering the mean months of delay, again the mean delay caused by use of alternative medicine [(5.65± 0.22) months] is significantly greater than the delay caused by other factors (p-value = 0.0058).

CONCLUSION

There are various factors that cause delay in diagnosis in patients of breast cancers, after self detection of breast lump. In this study, seeking help of alternative medicine came out to be the most important factor to cause such delay. There are many other factors also, like, fear of being diagnosed with cancer, lack of knowledge regarding symptoms and course of cancer, fear of disease spread because of performing biopsy for diagnosis, lack of assistance from accompanying persons etc. Proper education of the patients regarding symptoms of breast cancer, its course, proper management and prognosis may reduce this delay in diagnosis and initiation of treatment.

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