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PROFILE OF BREAST CANCER PATIENTS AND ITS MANAGEMENT: STUDY AT TERTIARY CARE HOSPITAL IN UTTRAKHAND

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ABSTRACT

Background and Aims: We carried out this study in order to know the epidemiology and management strategies for breast cancer patients in our patient population.

Settings and Design: The epidemiological data pertaining to demography and risk factors for carcinoma breast were analyzed retrospectively in patients admitted to a tertiary care hospital of North India.

Materials and Methods: Hospital records of 35 patients admitted for surgery over a period of two years (Jan 2017 to Jan 2019) were used for data analysis.

Results: Mean age of our female breast cancer patients was found to be lower compared to the western world, with an average difference of one decade. A majority of the patients were from an urban background and had a longer duration of symptoms. Lump in the breast was a dominant symptom. Familial breast cancer was uncommon. Left sided breast cancer was slightly preponderant. Screening by mammography and staging procedures such as bone scan, Computed Tomography (CT) scan, and Magnetic Resonance Imaging (MRI) were sparsely used. The most common histology was infiltrating duct carcinoma.

Conclusion: Modified radical mastectomy was found to be a safe operative procedure.

Breast conservative surgery, although considered the gold standard in early breast cancer, was found unsuitable for our patients, due to the social background and lack of intensive radiotherapy and chemotherapy backup.

Infiltrating duct carcinoma was more commonly associated with positive lymph nodes compared to other histopathology.

KEYWORDS : Breast cancer, epidemiology, surgery

INTRODUCTION:

Cancer incidence and mortality are rapidly growing worldwide, Cancer rates could increase by 50% to 15 million new cases in the year 2020[1]. Global cancer statistics 2018 has found that there will be estimated 18.1 million new cancer cases and 9.6 million will be cancer related deaths. Among females, breast cancer is the most commonly diagnosed cancer and the leading cause of cancer death. There will be approximately new Breast cancer cases 2,088,849 (11.6%) cancer related deaths 626,679 (6.6%)[2].Breast cancer has ranked number one cancer among Indian females with age adjusted rate as high as 25.8 per 100,000 women and mortality 12.7 per 100,000 women.[3]The information on the epidemiology of breast cancer in India is very limited, except for a few reports on limited samples.[4]Breast cancer is a heterogeneous disease and its management also Immunologically and histologically heterogeneous in character and requires multidisciplinary treatment.[5]This retrospective study was carried out to know the epidemiology, clinical presentation, risk factors, and management strategies for breast cancer patients.

MATERIAL AND METHOD:

A total of 35 primary breast cancer patients operated over two year period (Jan 2017 – Jan 2019), in a tertiary care center in North India, were taken up for study. The breast cancer patients already treated by mastectomy outside were excluded. A majority of the patients (71.4%) were in the age group of 40 - 60 years. The youngest patient was 29 and the oldest was78 years old. All the operated patients (100 %) were females. All the patients presented with a lump in the breast; 14 (40%) patients had a lump in the right breast and 20 (57.1%) cases had it in the left breast. One case (2.8%) had lumps in both breasts. majority of the patients had lumps in the upper and outer quadrant. The duration of presenting complaints as presented with a history of more than three months' duration and only 1 (2.8%) patient presented with a history of less than 15 days duration. Menstrual status was also recorded patients, of which 23(65.7%) were postmenopausal and 12(34.2%) were premenopausal. No patient had a positive family history of breast cancer. Fine needle aspiration cytology (FNAC) was done in all patients; it was positive for malignancy in 33 (95.2%) and negative or inconclusive in 02 (5.7%) patients. These patients later on underwent trucut or excision biopsy for confirmation of diagnosis. Mammography was also done only in 15 (42.8%) patients. None patients were diagnosed to have metastasis in the lungs on a chest X-ray. An ultrasound of the abdomen was done and 1(2.8%) patientwas found to have metastasis in the liver. Liver function tests (LFTs) were done and none of these patients had abnormal LFTs. Bone scan status was known in only 03 (8.5%) patients. 1 of these (33.3%) had metastasis in the bones and was clinically LABC. A total of 33(94.2%) patients underwent immediate surgery. Of the remaining 2 were operated after down staging the disease by neoadjuvant chemotherapy. 33(94.2%) patients underwent classical modified radical mastectomy (MRM).2(5.71%) patients underwent breast conservative surgery.A total of 2 (5.71%) toilet mastectomies were done. These patients had ulcerated fungating masses. 1 (2.8%) patients already had lumpectomy and MRM done and were categorized as completion MRM. In 1 (2.4%) patients with stage IV disease, mastectomy was done as a surgical palliation, although they were not having fungating mass lesions and these were categorized as palliative MRM. Two (5.71%) patient were subjected to wide excision of primary tumor with excision of eroded nipple areolar complex. A majority of the patients, 31 (88.5%), received anthracycline-based chemotherapy with Cyclophosphamide, Adriamycin and 5-flurouracil (CAF), and 03 (8.5%) receiving cyclophosphamide, Epirubicin and 5-flurouracil (CEF), respectively. One patients (2.58%) received hormone therapy in the form Herceptin.The final histopathology of 33 operated patients invasive ductal carcinoma (IDC) NOS variety.Out of axillary dissection, lymph nodes were isolated from the specimen 4(11.4%) patients had 6 - 10 lymph nodes, in 9 (25.8%) patients 11 - 15 lymph nodes, in 12 (34.2%) patients 16 - 20 lymph nodes, and in 7 (20%) patients more than 20 lymph nodes were isolated. Out of these 35 patients, 9 (25.7%) had no lymph nodes positive for carcinoma metastasis in the histopathology specimen. In 13 (37.1) patients, 1 - 3 lymph nodes were positive. In 8(22.8) patients, the number of lymph nodes positive was in the range of 4 - 9. Only 2 (5.7%) patients had more than 10 lymph nodes positive in the final specimen. The final staging in a majority of patients was LABC 14 (40%). 18 (51.4%) patients were EBC, that is, stage II b or less, and 1(2.8%) patients was in stage IV. Two (3.3%) patients could not be staged due to previously done neoadjuant chemotherapy and their final histopathology revealed no evidence of primary tumor. Hormonalstatus was also evaluated estrogen and receptor status were negative in19 (54.2%) cases and Her- 2 was positive in 12(34.2%) cases.

DISCUSSION

The aim of this retrospective analysis was to study the epidemiology of breast cancer and its histopathological correlation at a tertiary care hospital in North India. A majority of the patients (71.4%) were in the fourth to sixth decade of their life, as also reported in studies from India

and other Asian countries. [6],[7],[8],[9],[10] However, reports from the western world show that female breast carcinoma is predominantly seen in the fifth and sixth decade. [11],[12],[13] .Out of all the patients 20 (57.1)were from a urban background similar toreports from India as well as United States show higher incidence in urban population compared to the rural population. [16] [6] A majority of the patients25 (71.4%) were found to be of lower socioeconomic status and a similar finding has been observed in other studies. [17] Lump in the breast was the chief presenting complaint in a majority of the patients (97.1%), as reported in various studies. [18], [19] No patient presented with an isolated complaint of nipple discharge or pain in the breast.

The incidence of breast carcinoma was more on the left side in the upper outer quadrant corroborating with the previous reports. [20], [21], [22], [23], [24] The possible explanations are that the left breast is bulkier and the upper outer quadrant has a relatively larger volume of breast tissue. [22], [24]. Only 2 of the patients were nulliparous, whereas, others had two or more children. However, other reports indicate higher incidence of breast carcinoma in nulliparous females. [25], [26) [7], [27], [28], [29] Incidence of breast carcinoma was more in postmenopausal patients and age of menopause was in the range of 41 to 50 years in most of the patients 23 (65.7%). A similar finding of early age of menopause in Indian females in comparison to their western counterparts has been observed in the past. [30] The earlier published reports also show that the risk of breast carcinoma increases with increasing age of menopause, possibly because the women are exposed to hormones for a longer duration. [28],[29],[31] For the diagnosis of breast carcinoma, FNAC was done in most of the cases (95.2%) and a positive predictive value of 85.3% was obtained. FNAC is a useful diagnostic tool because it is rapid and cost effective. [32] The use of core needle biopsy (CNB) with mammographic or ultrasonographic guidance is being increasingly used for nonpalpable tumors. [32]. Mammography is an important tool for breast carcinoma screening between 50 and 70 years, when the breast tissue content decreases and fat content increases. As part of a metastatic workup, a complete metastatic workup is unnecessary in a majority of the patients with newly diagnosed breast carcinoma, whereas, it may be indicated for specific patient categories, such as, those with stage III disease. [33] Clinical TNM staging is an important clinical parameter of breast carcinoma. Surgery formed the principle mode of therapy. Popularity of BCS is increasing in the western world. [34],[35],[36] As per some recent reports, BCS has become the preferred method of treatment for many patients. [37],[38] But inour context The absence of a Radiotherapy Unit, patient ignorance, illiteracy, and poor follow up are the main reasons for a low rate of BCS. A one-time procedure of meticulous MRM leads to good loco regional control and still remains an important tool for managing breast cancer in India. Postoperative morbidity was seen in the form of lymphorrhea / seroma (28.5%), flap necrosis (2.8%), and wound infection (2.8%), which was comparable with the reports in the literature. [39],[40],[41],[42],[43],[44] The incidence of lymphorrhea, following axillary dissection Literature also supports that the major factor predicting lymphorrhea was the number of positive lymph nodes isolated and indirectly indicates a more complete axillary dissection, which is an important prognostic indicator in cases with breast carcinoma. [45],[46] Neoadjuvant chemotherapy was given in 2(6.7)% of the patients for down staging the disease and a majority of these cases were later operated. Our study as well as reports from India and the western world indicate that IDC is the most commonly encountered histopathology. [17],[20],[22], [48], [49] Ductal carcinoma in situ (DCIS) accounts for over 20% of the breast carcinoma cases in the western world, due to early detection by screening. [23] However, in developing countries like India, most patients present late, due to lack of screening programs, leading to a very low incidence of DCIS. 14 Patients (40%) presented with LABC, which is in accordance with other reports from India. [47] LABC is a relatively uncommon presentation (5-20%) in economically developed countries, due to better public awareness and availability of medical resources. [50] On correlating age with the stage of disease, it was found to be statistically insignificant ($P > 0.05$), showing no relation between age and stage of presentation, which is in accordance with other studies. [48],[51] Correlation of duration of symptoms and stage of breast carcinoma reveals a highly significant value ($p < 0.001$), indicating that patients with a rural background are more likely to present in late stages of the disease as compared to their urban counterparts.[52] Node positivity IDC, right-sided breast cancers are more commonly associated with lymph node positivity. [48]

In conclusion, the mean age of presentation for breast carcinoma is a decade earlier in our patients compared to patients from the westMost patients in our set up are unable to afford mammography due to their poor socioeconomic background. Thus there is a need for developing other cost-effective screening modalities for breast cancer in addition to propagating breast self-examination in masses, for early detection. Although BCS is gaining popularity worldwide, MRM still remains the gold standard for the management of breast carcinoma in the present circumstances, in most parts of India. In view of the rising incidence of breast carcinoma and the prevailing controversies in its management, it is recommended that they should preferably be managed by surgical oncologists for improvement in the patient's outcome.

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