Original Research Paper

Volume - 7 | Issue - 8 | August - 2017 | ISSN - 2249-555X | IF : 4.894 | IC Value : 79.96

General Surgery

STUDY OF LOCALLY ADVANCED BREAST CANCER REGISTERED AT THE D.Y.PATIL HOSPITAL, PUNE.

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ABSTRACT

Introduction: Breast cancer is the second most common cancer among women in India, after cancer of the cervix uteri. Presently, 75,000 new cases occur in Indian women every year. Locally advanced breast cancer constitutes more than 50% to 70% of patients presenting for treatment. Locally advanced breast cancer (LABC) represents some of the most aggressive breast cancers. Although in USA only 10-20% of all breast cancer patients present as LABC, in India, 30-60% present as a LABC.

Methodology : Case records of all the female patients registered at the Breast Cancer Clinic at D.Y.Patilhospital,pune over a one-year period from April 2016 to April 2017 were retrieved. Patients with tumours more than five cm (T3) were included if they had N2 metastasis with stage III disease.

Results : About 60% of breast cancer patients have grade 3 tumours, 66% have auxiliary lymph node metastases, and 58% are both estrogen (ER) and progesterone (PR) receptor-negative. Data from Mumbai shows a slightly lower ER- and PR-negative rate of 47% .

Conclusion: The poor overall survival rateof breast cancer reflect delay in diagnosis, advanced stages of disease at presentation, and, probably, inadequate facilities for early diagnosis and treatment

KEYWORDS :

Introduction

Locally advanced breast cancer (LABC) is a very common clinical presentation of mammary carcinoma in developing countries (30% to 60%). LABC accounts for 10 - 20% in the Western part of India[1] while in India it accounts for 30 - 35% of all cases of LABC. LABC is a heterogeneous group of tumours of varying clinical presentations and biological behaviour whose only common bonds are the presence of a large primary tumour, or extensive regional lymph node involvement, and the absence of any evidence of distant metastases. Locally advanced breast cancer (LABC) refers to large breast tumours (> 5 cm) associated with either skin or chest wall involvement or with fixed axillary lymph nodes or with involvement of the ipsilateral internal mammary or supraclavicular nodes. [2]

Neo-adjuvant chemotherapy is known to be beneficial for down-staging patients with locally advanced breast cancer. Clinical stage, degree of cell differentiation and expression of estrogen/progesterone receptors and HER2/neu are all prognostic factors that may effect survival of patients with locally advanced breast cancer. [6] The age standardized incidence rates (AARs) range from 6.2 to 39.5 per 100,000 Indian women. The AARs vary from region, ethnicity, religion, with the highest incidence reported at 48.3 per 100,000 women in the Parsi community of Mumbai .[3]

The present standard of treatment for LABC is still evolving. In the past decade anthracycline-based chemotherapy in the neoadjuvant setting followed by surgery and locoregional radiotherapy, followed by hormonal therapy in hormone receptor positive patients, has been the standard. Taxanes are under intense investigation .[4]

Combined or sequential use of anthracyclines and taxanes are both acceptable. Capecitabine and Gemcitabine have been recently incorporated into trials assessing NACT. [5]

The administration of systemic chemotherapy prior to local therapy is advantageous for women with locally advanced breast cancer, as it can render inoperable tumorsresectable and can increase the rates of breast conservative surgeries. [6]

Material and methods

Case records of all the female patients registered at the Breast Cancer Clinic at D.Y.Patilhospital, pune over a one-year period from April 2016 to April 2017 were retrieved. Patients with tumours more than five cm (T3) were included if they had N2 metastasis with stage III disease. All LABC cases with pathological confirmation either by fine needle aspiration cytology or core biopsy and who had been treated by at least one mode of treatment (surgery, chemotherapy or radiotherapy) were included in the analysis. LABC was defined as tumorsof more than five centimetres,N2 metastasis, skin infiltration,peau de orange at diagnosis.

Clinical, surgical, and histological data as well as tumour marker expression were assessed using immunohistochemistry; all data were standardized. The tumour, node, metastasis (TNM) clinical staging system (7th edition, 2010) was used. Prior to chemotherapy, clinical and radiologic staging and sys response evaluation criteria in solid tumours (RECIST) radiologic classification cutoff values were adapted for 1-dimensional pathologic breast assessment [(RECIST-breast (RECIST-B)], with the cutoff points for 1-dimensional invasive breast disease established as 30% for partial response and 10% for progressive tematic breast assessment were performed for all patients

Results

About 60% of breast cancer patients have grade 3 tumours, 66% have auxiliary lymph node metastases, and 58% are both estrogen (ER) and progesterone (PR) receptor-negative. Data from Mumbai shows a slightly lower ER- and PR-negative rate of 47% .

All Indian breast cancers are clinically detected; almost none are detected by screening. Up to two-thirds of patients present with local invasion, and 6–25% present with metastases. Significant proportions present with T2/T3 tumours, and even more strikingly, up to one-third of all patients have skin and/or chest wall involvement.

Discussion

Many factors influence the survival of patients withbreast cancer; they include patient factors, stage ofdisease, tumour biology, and cancer treatment. Population-based studies on breast cancer in India have showed five-year survival rates ranged from 42-48%,whereas hospital based studies across India shows 5 yearsurvival rate ranged from 40-45 %.11-15 Five-yearsurvival rates of more than 80% have been reported inmany studies from the West and also from a developedAsian country in India.[7,8] The poor overall survival rateof breast cancer reflects delay in diagnosis, advancedstages of disease at presentation, and, probably, inadequate facilities for early diagnosis and treatment.

Locally advanced breast cancer contributes significantly to cancer mortality among women worldwide. It is particularly important to

address this disease in developing nations, where over 70% of all cancer cases will occur by 2020. There is an overwhelming need for systematic studies that pinpoint areas of need within the context of each developing nation and also within regions in a developing nation. Research in these settings and dissemination of these data [9,10,11] will guide the judicious use of available financial and human resources. In this article, we have suggested strategies for addressing LABC in LMICs. Potential solutions include investing in CBE and awareness campaigns, gathering data and establishing quality control protocols for mastectomies, focusing on the provision of few but effective chemotherapeutic agents, and investigating cost reduction methods for radiation therapy including shorter regimens. [12,13,14,15] The poor overall survival rateof breast cancer reflect delay in diagnosis, advancedstages of disease at presentation, and, probably,inadequate facilities for early diagnosis and treatment

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