



STUDY OF BREAST CANCER IN YOUNG FEMALES IN AJMER REGION

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ABSTRACT

Breast cancer in young age has poor prognosis. Clinicopathological parameters along with FNAC, histological features and immunohistochemistry for diagnosis of breast cancer in young females were analysed. This study was conducted from January 2013 to July 2016, in Department of Pathology. Females less than 40 years, who were diagnosed breast malignancy on FNAC were included in the study. A total of 32 cases were analysed, out of which 18 cases were followed up by histopathological examination and immunohistochemistry. The youngest patient was of 21 years. Majority of cases were invasive duct carcinoma. One case of pleomorphic variant of lobular carcinoma and one case of ductal carcinoma with mucinous differentiation was reported. Breast cancer is not uncommon in young age in India. These patients have a higher incidence of invasive ductal carcinoma, a greater number of lymph node-positive cancers. FNAC is a reliable and fast method for diagnosing breast cancer, even in young age, where radiological findings are not very reliable.

KEYWORDS : young female, invasive duct carcinoma, lymphovascular invasion.

INTRODUCTION

Breast cancer is the most common malignancy in women worldwide. While the risk of breast cancer in Asian countries is lower than in the West, increasing numbers of women are being diagnosed with this disease in parts of Asia⁽¹⁾. Breast cancer incidence increases with age, with the vast majority of women diagnosed after the age of 40 years⁽²⁾. In young women, the incidence of the disease is low, less than 17 cases per 100,000 women.

Though there have been studies carried out to determine if the behaviour of breast cancers in younger women differs from the majority, these have mostly addressed pathological characteristics in Western populations, and data on this disease in young women in India, as well as Asia, are not well elaborated⁽¹⁾.

Evidence suggests that breast cancer in this age group is more aggressive and associated with poorer outcome than in their older counterparts. This could be ascribed to a combination of factors, including delayed presentation, advanced disease stage, and unfavourable tumor characteristics. Lack of adequate screening and awareness is the major contributory factor.

The definition of a 'young woman' in the field of breast oncology varies, with most articles referring to women under either age 35 or 40 years as 'young'⁽³⁾.

AIM OF THE STUDY

- To assess clinicopathological parameters in young women with breast cancer.
- To evaluate the accuracy of fine needle aspiration cytology in diagnosing breast cancer in females less than 40 years of age, by correlating with histopathological features and immunohistochemistry, wherever possible.

MATERIAL AND METHODS

This retrospective and prospective study was carried out in Department of Pathology, J.L.N. medical college, Ajmer, summarizing data collected between January 2013 to July 2016.

Inclusion criteria – Females younger than 40 years reported as breast malignancy in FNAC were included in this study.

Exclusion criteria – Females more than 40 years and male breast cancer were excluded from the study.

368 Cases were diagnosed as breast carcinoma during this period, out of which 32 were females younger than 40 years of age. These cases

were followed-up. Out of 32, 18 Specimens were received for histopathology examination.

Immunohistochemistry was done on 18 cases.

RESULTS:-

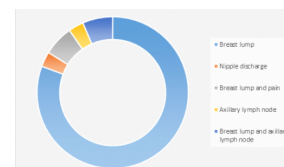
Table 1: showing agewise incidence of breast cancer in young age females

Age distribution	Number of cases
36-40 year	18
31-35 year	9
26-30 year	4
21-25 year	1
Total	32

32 cases were identified as breast cancer on FNAC. Most common age group to be affected was 35–40 years (62.5%). The youngest patient in the study was of 21 year age.

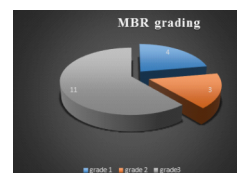
In this study, most common age of menarche was 12 years, seen in 34% cases.

Figure 1: Showing distribution of cases according to clinical features



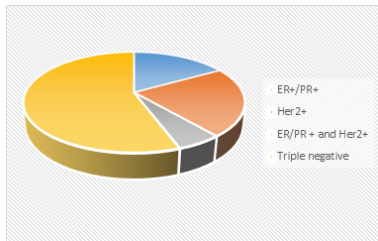
In our study, the most common symptom was breast lump seen in 25 cases (78.12%). Right sided breast (56.25%) was most commonly involved. 1 case with bilateral breast involvement was seen. 1 patient presented with axillary lymph node and 1 case presented with nipple discharge.

Figure 2: Showing grading of histologic sections according to MBR score



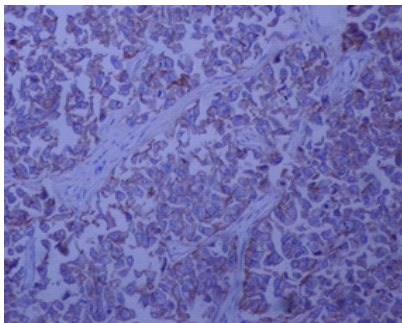
On histologic examination of sections, breast carcinoma was graded on the basis of MBR scoring. Most of the tumors (61.11%) were high grade i.e. grade 3.

Figure 3: showing percentage of hormone receptors positive, HER2 neu positive and triple negative breast cancer



IHC was done for all 18 cases. 10 cases (56%) were triple negative, showing aggressiveness of breast cancer in young age. 22% cases were Her2+ I've.

Figure 4: Immunohistochemistry showing weak to moderate complete membrane staining of Her-2-neu in the tumor cells of breast carcinoma (×200)



DISCUSSION:

In our study, 368 cases of breast carcinoma were diagnosed during the study period, out of which, 32 patients were of age younger than 40 years (incidence 8.6%). Out of 32 cases, most common age group affected was 36-40 years (62.5%). The youngest patient reported as breast cancer was of 21 years.

In a study done by Vinod Raina et al⁽⁴⁾ 271 young patients of breast cancer were analysed. The incidence of breast cancer in young females were found out to be 8%. The youngest patient was 18 years old.

In a study done by Deepti Sharma et al⁽⁵⁾ 133 patients (33.07%) were young, out of 372 patients and the youngest patient was 23 years old. In a study by shanika m. fernandopulle et al (1) the youngest patient was of 19 years.

In our study the commonly clinical feature was breast lump (78.1%), commonly in right side. 1 case of bilateral breast lump was reported.

According to study by Vinod Raina et al⁽⁴⁾ breast lump was the commonest (93%) presenting symptom (left >right side). The median duration of symptoms was four months (ranged between 1 and 24 months). The median age of menarche was 12 years (ranging between 11 and 15 years). Family history of breast cancer was elicited in 1 case. 96.8% of patients were married and median age of 1st child birth was 24 years.

According to the study done by A. Sidoni⁽⁶⁾, family history of breast cancer was seen in 8 cases out of 34 cases (24%). Mean age at menarche was 12.5 years (ranging between 10 - 15 years). 8 patients (24%) were nulliparous.

Vinod Raina et al⁽⁴⁾ in their study found that the median age was 31 years (range 18-35). The median duration of symptoms was 10 months (range 0.25-60). Ninety percent of patients were married and median age at first child birth was 23 years. Positive family history was elicited in only 15 patients (5.53% cases).

In our study, cyto-histology correlation was 96.8%. One case diagnosed as ductal carcinoma was found out to be lobular carcinoma

in histopathology.

The most common malignancy in young age female was infiltrating ductal carcinoma (95%). One case of pleomorphic variant of lobular carcinoma (5%) was reported. One case of ductal carcinoma with mucinous differentiation was identified. In our study, 61.11 % cases were grade 3, 22.22% were grade 2 and 16.66% were grade 1 on MBR scoring. 85.5% of patients had an advanced grade tumor, i.e. 55.5% patients had lymph node metastasis and 40% patients had lymphovascular emboli. 55.5% of patients had a triple negative breast cancer.

Shanika M et al⁽¹⁾ found Histological subtyping disclosed 84 (92.3%) ductal, two (2.2%) lobular, two (2.2%) mucinous, two (2.2%) atypical medullary and one (1.1%) with both ductal and lobular features. Histological grading was accomplished in 85 (93.4%) cases, of which 54 (59.3%) were grade 3, 24 (26.4%) grade 2 and seven (7.7%) grade 1. Lymphovascular invasion was found in 23 (25.3%) cases. The nodes were involved in 39 cases (61%).

In the study done by Vinod Raina et al⁽⁴⁾ the histopathological analysis showed 93% had infiltrating ductal carcinoma. Thirty percent of tumors were high grade and 55% had pathological node positive disease. ER/PR and her-2neu positivity was 33% and 30% respectively. Triple negative breast cancer (TNBC) constituted 33%.

According to the study done by A. sidoni et al⁽⁶⁾, 44 cases (88%) were found to be infiltrating ductal carcinoma and 2 (4%) were lobular carcinoma on histological examination. Most of the cases were of grade 2 (58%), followed by grade 3 (38% cases). Lymph nodes were positive in 53% cases.

CONCLUSION:

Breast cancer is not uncommon in young age. Young women constituted 8.6 % of breast cancer cases, this proportion is much higher than the published Western figures of 1-2 % and reflects younger age of our population .FNAC has a very important role in diagnosing breast cancer, even in young age, where radiological findings are not very reliable. Young aged patients have a worse prognosis than older one. These have a higher incidence of invasive ductal carcinoma (IDC), lymphnode-positive cancers, lymphovascular invasion and ER-negative tumor.

As breast cancer in young women is associated with poor outcome, educational programmes and mass compaigns regarding breast self examination and awareness should be organized targeting this group.

Conflict of interest- Non declared

References –

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