IJBPAS, February, Special Issue, 2022, 11(2): 01-06
ISSN: 2277–4998

International Journal of Biology, Pharmacy and Allied Sciences (IJBPAS)
'A Bridge Between Laboratory and Reader'

www.ijbpas.com

ASSESSING INCIDENCE OF BREAST CANCER IN PATIENTS PRESENTING WITH MASTALGIA AND ROUTINE CHECK-UPS

BHATMULE A[1], JANUGADE HB[2], AND NAGVEKAR M[3]

1: Junior Resident, Department of Surgery, Krishna Institute of Medical Sciences, deemed to be University, Karad, Maharashtra (India)

2: Professor, Department of Surgery, Krishna Institute of Medical Sciences, deemed to be University, Karad, Maharashtra (India)

3: Associate Professor, Department of Surgery, Krishna Institute of Medical Sciences, deemed to be University, Karad, Maharashtra (India)

***Corresponding Author: Dr. Advait Prashant Bhatmule: E Mail: advaitbhatmule@gmail.com**

Received 12th July 2021; Revised 14th Aug. 2021; Accepted 27th Oct. 2021; Available online 15th Feb. 2022

https://doi.org/10.31032/IJBPAS/2022/11.2.1001

INTRODUCTION

Current statistics suggests that approximately 70 percent of women and girls (post pubertal) experience breast pain once in their lifetime **[1]**. Mastalgia can be defined as pain or discomfort in breasts **[2]**. Out of the established cancer patients approximately 0.3-2 % of the patients will present with mastalgia to the outpatient department. As awareness for breast cancer among females increases, mastalgia has become one of the commonest presenting symptoms seen by a breast surgeon **[3]**. Mastalgia could be cyclical or non-cyclical which further can be divided into unilateral or bilateral. Cyclical mastalgia means tenderness over breast experienced in sync with the menstrual cycle of the female which can be either bilateral or unilateral and can be caused due to increase in swelling in the breast tissue. While non-cyclical mastalgia typically presents unilaterally and the tenderness is more localised rather than diffuse as seen in cyclical mastalgia. Commonest age of presentation with non-cyclical mastalgia is seen the age group of 40-50 years

In comparatively younger women i.e., <40 years of age, cancer has been difficult to diagnose as a result of denser breast tissue compared to their older counterparts. As a

general observation, breast cancer has been observed to be more aggressive and less likely to elicit any response to treatment in younger age groups. Hence regular breast self-examination (BSE) for all females above the age 20 years is recommended

The aim of this study is to find out whether there is an increase in the number of new cases of breast cancer in females suffering from mastalgia to the hospital outpatient department.

MATERIAL AND METHODS

This research was performed on the patients coming to the General Surgery OPD at Krishna Institute of Medical Sciences, Karad showing signs and symptoms of mastalgia from August 2020 to March 2021.

The 300 women who presented to the OPD were divided into 2 following groups: -

(1). The control group of asymptomatic patients who came for routine breast examination -GROUP 1

(n = 100); and the

(2). Trial group which was made of patient presenting with complaints of Mastalgia group – GROUP 2

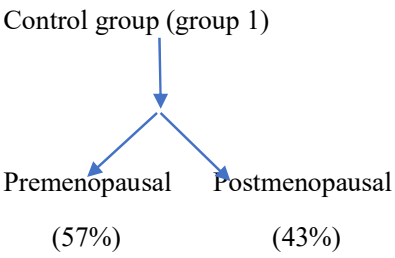
(n =200).

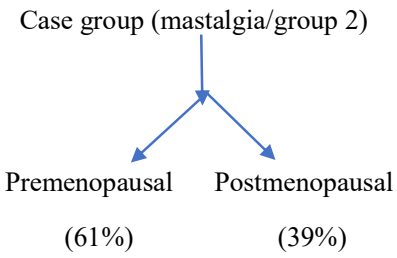
The following patients were excluded: -

1. Females with history of breast cancer
2. Females with palpable breast mass
3. Pregnant females/breastfeeding
4. Trauma to chest skin/wall
5. Presence of an abscess
6. Females with family history of ca breast

RESULTS

Keeping in mind the exclusion criteria 300 women were included in this study. The mean age of the control group of women presenting to OPD for routine check-up was of 44.2 ± 11.9(range 14-86) while the mean age of patients presenting with mastalgia comprised 200 women had average age of 43.4 ± 11.7 (range 13-77). Np significant difference in mean age was observed in both the groups statistically i.e. p = 0.195. In the mastalgia group 15% presented with cyclical pains while the remaining 85% experienced noncyclical mastalgia.





Ergo there was no statistical difference between the 2 groups (p = 0.190).

In the control group, 45 % patients underwent mammography while 39% of the patients belonging to group 2 underwent mammography

While ultrasonography was the modality in 90% of patient included in control and 93% of mastalgia group

After the reports of each modality was obtained and observed, an important corelation between the two groups was seen taking BIRADS classification into consideration.

The results from BIRADS appeared higher than mastalgia group-

-BIRADS 1 constituted 40% in group 1 while 37% in group 2

-BIRADS 2 made up for 39% of control group compared to that of 53% of mastalgia group

-Respectively BIRADS 3 was 3 % in control while &% in mastalgia group

(p = 0.049). Out of the control group 49% patients were observed to have lesions while this number was 55%in the mastalgia group. The commonest benign lesions in each group -

1. fibrocystic,
2. fibroadenoma and
3. ductal ectasia.

Correlation between the two groups regarding lesion distribution was found to be non-existent.

1% of the patients were diagnosed with the disease in question out of both the groups.

Of the 10 patients of breast CA, only two were found with USG while eight with mammography.

Keeping the mammography findings in regard,

BIRADS 4 in 2 patients and BIRADS 5 in 1 patient were present in the control group even as BIRADS 4 in 4 patients and BIRADS 5 in 1 patient were found in the mastalgia group.

Final diagnosis of breast cancer was established by trucut biopsy.

Pathological findings revealed that in the first group, one afflicted person had invasive ductal carcinoma while invasive ductal carcinoma was present in one sufferer and lobular carcinoma in situ in the other cancer diseased belonging to the mastalgia group.

Hence all patients diagnosed with breast carcinoma presented to the OPD with non-cyclical mastalgia.

DISCUSSION

Mastalgia continues to be one of the commonest symptoms with which a female patient presents with to the surgery OPD. Till date studies have never demonstrated any strong relation between mastalgia and

CA breast, having said that the uneasiness of mastalgia being possibly a result of ca breast still exists. Several studies suggest cyclical pain to be an independent presentation regardless it can be advantageous as it increases the awareness of ca breast among premenopausal females[3] in turn bringing them to the surgery OPDs seeking earlier medical attention. As seen in our study, 1% of the patients in the mastalgia group were diagnosed with ca breast out of which 1 was postmenopausal and 1 premenopausal, non-cyclical pain being common in both the patients. Now observing the routine screening group 1 % of the patients was diagnosed with ca breast out of which both patients were postmenopausal.

Breast imaging for mastalgia can determine whether there is any underlying curable cause, but it cannot rule out breast cancer as a diagnosis. Irrespective of the results being positive or negative screening is useful to alleviate the anxiety and provides guidance for feasible treatment. Howard, *et al*. **[4]** showed that the initiation of an imaging with an imaging modality for breast pain in a negative clinical examination did not cause any increase in cancer detection compared to non-breast pain.

Mastalgia constitutes one of the indicators for diagnostic mammography indexed inside the ACR Application Manual for Scanning and Diagnostic Mammography Performance.

In this study mammography was the modality of choice in 40% while ultrasonography in 93% of the patients who presented with mastalgia to surgery OPD. In younger women Ultrasonography is always preferred to mammography as it reduces the exposure to radiation. A study by Loving, *et al*. **[5]** concluded a 100% sensitivity while also substantiated a 100% negative predictive value of breast ultrasonography. In a retrospective study conducted by Meshram, *et al*. **[6]** 99 mastalgia sufferers without any palpable mass, were subjected to 110 targeted ultrasonography examinations. 65% of the patients were subjected to mammography. No cancerous lesion was detected at the site of pain. Hence to conclude imaging modalities are more useful I reassuring patients presenting with mastalgia rather than establishing a diagnosis.

In a retrospective research conducted by Hoefer, *et al* **[4]**., in a total of 86 patients with the affliction of focal breast pain without palpable mass, diagnostic mammography and ultrasonography assessment were performed out of which 4 cancers were detected (4.6%)-

1. 2 were in areas of pain (2.3%)
2. 2 were unrelated to the location of pain.

Jemal, and others **[5]** conducted a prospective follow up study of 987 patients (1992-1996, 2yr follow-up), assessed breast screening in patients having mastalgia alone (diffuse or focal). The control crowd was consisted of 987 ladies without the presenting symptoms of mastalgia who applied for a screening mammogram. Of the female population in the mastalgia group, 0.8% had cancer whereas 0.7% of the control who had been asymptomatic had gotten afflicted with breast cancer. In the research that we conducted, the incidence, in both the mastalgia and control group, of cancer, was 1% respectively.

Limitation of the study conducted was retrospective in nature. Multicentric, prospective and follow up research are further needed to validate the proofs.

CONCLUSION

In conclusion patients presenting with mastalgia to the surgery OPD when compared to patients presenting for routine check-ups, no difference in incidence of breast cancer in both the groups was seen. Risk of ca breast was not increased in the female patients presenting with breast pain.

Majority patients with breast pain are focussed on due to imaging modalities in order to exclude the suspicion of cancer. Irrespective of this, breast imaging for any type of mastalgia can help to assess if there is any curable causative factor for the mastalgia.

Acknowledgement

I am thankful to Mrs. Rupali Salunkhe for secretariat help, Krishna Institute of Medical Sciences, Deemed to University, Karad, Maharashtra (India).

REFERENCES

[1] Coveney EC, O'Dwyer PJ, Geraghty JG, O'Higgins NJ, Effect of closing dead space on seroma formation after mastectomy-a prospective randomized clinical trial, European journal of surgical oncology, 19(2), 1993, 143-6.

[2] Dalberg K, Johansson H, Signomklao T, Rutqvist LE, Bergkvist L, Frisell J, Liljegren G, Ambre T, Sandelin K, A randomised study of axillary drainage and pectoral fascia preservation after mastectomy for breast cancer, European Journal of Surgical Oncology, 30(6), 2004, 602-609.

[3] Funnell IC, Crowe PJ, Dent DM, Does surgical experience influence mastectomy complications?, Annals of the Royal College of Surgeons of England, 74(3), 1992, 178.

[4] Hoefer Jr RA, DuBois JJ, Ostrow LB, Silver LF, Wound complications following modified

radical mastectomy: an analysis of perioperative factors, The Journal of the American Osteopathic Association, 90(1), 1990, 47-53.

[5] Jemal A, Siegel R, Ward E, Murray T, Xu J, Smigal C., Cancer statistics, Cancer J Clin., 56(2), 2006, 106-130.

[6] Meshram II, Hiwarkar PA, Kulkarni PN, Reproductive risk factors for breast cancer: A case control study, Online Journal of Health and Allied Sciences, 8(3), 2009, 1-4.