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INCIDENCE OF UNCOMMON BREAST LESIONS IN INDIAN WOMEN AN ANALYTICAL STUDY

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ABSTRACT

Background: One of the most frequent surgical diseases reported to the Department of Obstetrics and Gynaecology in India is caused by lesions from the breast. Both benign and malignant illnesses can be challenging to diagnose and manage. The aggressive character of breast carcinoma, which is mostly dependent on the histopathologic stages and kinds, can be blamed for the disease's high death rates.

Aim: In order to understand the incidence of uncommon breast lesions in Indian women, the current study set out to evaluate the frequency of diverse breast lesions.

Methods: This study was a retrospective analysis conducted over a three-year period on individuals who reported having breast lesions to the institution. All reporting individuals provided a sample, and 174 breast specimens in total were assessed. The collected data were subjected to statistical analysis in order to formulate conclusions.

Results: Findings: Of the 194 specimens evaluated, 98.2% (n=171) came from female participants, and 1.7% (n=3) from male subjects. Among the research participants, borderline lesions were observed in 0.57% (n=1), 26.4% (n=46), and 72.9% (n=127), in that sequence. Special subtypes seen in 1, 1, 1, 1, and 3 instances were medullary carcinoma, clear cell carcinoma, metaplastic carcinoma, Paget's disease of the nipple, and mucinous carcinoma.

Conclusion: Based on the current data, it is important to evaluate uncommon and underappreciated breast lesions in order to reduce the rates of breast lesions-related death and morbidity.

Keywords: breast lesions, fibroadenoma, mucinous carcinoma, metaplastic carcinoma

INTRODUCTION

Throughout the reproductive period, human females experience changes in hormones that might affect the breast, an organ that is heterogeneous in humans. Starting at adolescence and continuing until menopause, breast tissues also experience major physiological and morphological changes. One of the surgical pathologies that is reported to the clinical practice in the Department of General Surgery in India most frequently is caused by lesions in the breast. Breast cancer, which affects 20 out of every 1,000 females, is also the second most frequent cancer in India, behind cervical cancer.1,2

Only relatively few occurrences of breast lesions have been reported in the literature for males, making them the primary cause of death and morbidity in women worldwide. Breast lesions, whether benign or malignant, can be challenging to diagnose and treat under different circumstances.3. Distinguishing between illnesses that require definite treatment and

those that just require supportive care and assurance is crucial. Nowadays, a variety of diagnostic techniques, including as mammography, ultrasonography, and fine-needle aspiration cytology (FNAC), are widely employed in instances that are detected early.4

The aggressive character of breast lesions, which mostly depend on the histological stages, kinds, and presentation, is responsible for the high death rates associated with breast cancer. The mammary ductal epithelium, namely the TDLU (terminal duct lobular unit), is the source of the majority of breast tumours. Of those diagnosed with infiltrating duct carcinoma, not otherwise defined, around 75% are derived from this epithelium.5

Invasive lobular carcinoma is the second most prevalent form of epithelial cell and accounts for 5–15% of all breast tumours. Though there have been reports of over 12 less frequent variations, the WHO (World Health Organisation) has nevertheless provided clear definitions for these variants.Six In order to understand the incidence of uncommon breast lesions in Indian girls, the current study set out to evaluate the frequency of diverse breast lesions.

MATERIALS AND METHODS

In order to understand the incidence of uncommon breast lesions in Indian females, the current retrospective clinical study set out to evaluate the frequency of diverse breast abnormalities. After receiving approval from the relevant institutional ethical committee, the study was carried out. The research participants were chosen from the institute's Department of General Surgery.

Prior to their involvement in the study, all individuals provided their written and verbal informed consent. A total of 174 samples from the individuals' breasts were evaluated for the investigation. This research includes all specimens that were evaluated after local excision of breast lesions, true cut biopsies, and mastectomy. Subjects with noticeable breast lesions who were willing to take part in the study met the inclusion criteria. Subjects who had previously had therapy for a malignancy and who did not provide consent to participate in the trial were excluded from the study.

There were 174 specimens evaluated in the study; of them, 21.2% (n=37) were from a mastectomy and 73.5% (n=128) from a lumpectomy. In 5.18% (n=9) of the research samples, true cut biopsy specimens were seen. Data on pertinent information, mammography results, fine-needle aspiration cytology (FNAC), magnetic resonance imaging (MRI), examination results, and clinical details were obtained from the institutional records for each specimen.

All of the specimens from the study participants' breasts that were evaluated in the Institute's Department of Pathology in various formats and storage media were processed in accordance with standard procedure, embedded in formalin-fixed paraffin sections, and stained with haematoxylin and eosin staining. Histopathological characteristics of each tumour were evaluated, and the WHO categorisation system was used to make the diagnosis.7

Based on the Nottingham variation of the Bloom-Richardson grading method, the invasive cancer of the breast was graded. Where appropriate and dependent on availability, specific stains and immunohistochemistry (ER, HER2/neu, ER) were employed. Unique discoveries and a variety of intriguing lesions were seen and thoroughly examined during the research period.

Statistical Package for the Social Sciences (SPSS Inc., Chicago, USA) software version 16.0 was used to analyse the collected data statistically. The Chi-square test and descriptive measure evaluation were performed. In addition to frequency and percentages, the findings were presented as mean and standard deviation. Statistics were deemed significant when the p-value was less than 0.05.

RESULT

In order to understand why Indian women experience unique breast lesions, the current retrospective clinical study set out to evaluate the prevalence of diverse breast lesions.

In all, 174 samples from the individuals' breasts were evaluated for the research. After local excision of the breast lesions, true cut biopsies, and mastectomy, every specimen was evaluated and included in the current study. The participants in the research ranged in age from 17 to 78. Out of the 194 specimens evaluated, 98.2% (n=171) came from female individuals, while 1.7% (n=3) came from male subjects. Breast lumps, both benign and malignant, were the most

prevalent symptom reported by research participants. Fever, soreness, and nipple discharge were other common symptoms, however they were reported by a smaller percentage of respondents.

Among the research participants, 0.57% (n=1), 26.4% (n=46), and 72.9% (n=127) had borderline lesions, malignant lesions, and non-malignant lesions, respectively. Non-malignant (non-neoplastic and benign) lesions, benign phyllodes, gynaecomastia, intraductal papilloma, fibroadenomas, fibrocystic disease, fibroadenoma, and granulomatous lesions were observed in 1.57% (n=1), 0.78% (n=1), 3.15% (n=4), 4.72% (n=6), 18.90% (n=24), 65.80% (n=87), and 2.36% (n=3) of the subjects, respectively (Table 1).

The sole borderline lesion observed was a borderline phyllode. Paget's disease of the nipples, clear cell carcinoma, mucinous carcinoma, metaplastic carcinoma, and medullary carcinoma were observed in 2.17% (n=1) instances each among 26.4% (n=46) of malignant lesions. Of the research participants, 89.13% (n=41) had invasive ductal cell carcinoma NOS (Table 1).

DISCUSSION

The goal of the current retrospective clinical investigation was to determine the incidence of different types of breast lesions in order to explain the occurrence of uncommon breast lesions in Indian women.

In all, 174 samples from the individuals' breasts were evaluated for the research. After local excision of the breast lesions, true cut biopsies, and mastectomy, every specimen was evaluated and included in the current study. The study design had similarities to those of Hanagiri T et al. (2008) and Tan P et al. (2007), whose authors had used a study design similar to this one in their own research.

The participants in the research ranged in age from 17 to 78. Out of the 194 specimens evaluated, 98.2% (n=171) came from female individuals, while 1.7% (n=3) came from male subjects. The most frequent symptom described by research participants was a breast lump, which included both benign and malignant tumours. Fever, soreness, and nipple discharge were other prevalent symptoms, albeit they were only reported by a small percentage of participants.

These findings were consistent with research conducted by Pezzi CM et al.10 in 2007 and Yerushalmi R et al.11 in 2009, whose authors evaluated participants using demographic information similar to that of the current study. According to study findings, 0.57% (n=1), 26.4% (n=46), and 72.9% (n=127) of study participants had borderline lesions, malignant lesions, and non-malignant lesions, respectively. Non-malignant (non-neoplastic and benign) lesions, benign phyllodes, gynaecomastia, intraductal papilloma, fibroadenomas, fibrocystic disease, fibroadenoma, and granulomatous lesions were observed in 1.57% (n=1), 0.78% (n=1), 3.15% (n=4), 4.72% (n=6), 18.90% (n=24), 65.80% (n=87), and 2.36% (n=3) of the subjects, respectively. .

The findings of Sakorafas GH et al. in 2001 and Malik R et al. in 2003, where the authors reported the occurrence of borderline lesions, malignant lesions, and non-malignant lesions in the breast comparable to the current study, were congruent with these results.

The only borderline lesion observed was a borderline phyllode, it was also observed. Of the 26.4% (n=46) malignant lesions, 2.17% (n=1) instances each had Paget's disease of the nipples, clear cell carcinoma, mucinous carcinoma, metaplastic carcinoma, and medullary carcinoma. Of the research participants, 89.13% (n=41) had invasive ductal cell carcinoma NOS. The results of Kwong A et al. (2008) and Maggard M A et al. (2003) concurred with these findings.

CONCLUSION,

After taking into account its limitations, the current study comes to the conclusion that, given the current situation, evaluating the uncommon and less common breast lesions is essential to lowering the death and morbidity rates linked to these lesions. Definitive results will be evaluated with the aid of more research with bigger sample numbers and longer monitoring times.

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TABLES

Diagnostic criteria	Lesions	Number (n)	Percentage in each category	Percentage in total cases
Non-malignant (non-neoplastic and benign) 72.9% (n=127)	**Benign phyllodes**	2	1.57	1.14
	Gynecomastia	1	0.78	0.57
	Intraductal papilloma	4	3.15	2.29
	Fibroadenosis	6	4.72	3.44
	Fibrocystic disease	24	18.90	13.80
	Fibroadenoma	87	65.80	50
	Granulomatous	3	2.36	1.72
Borderline 26.4% (n=1)	**Borderline phyllodes**	1	100	0.57
	Paget's disease of nipple	1	2.17	0.58
	Clear cell carcinoma	1	2.17	0.58
	Mucinous carcinoma	1	2.17	0.58
	Metaplastic carcinoma	1	2.17	0.58
	Medullary carcinoma	1	2.17	0.58
	Invasive ductal cell carcinoma NOS	41	89.13	23.56

Table 1: Histopathological spectrum in the breast lesions of Indian subjects