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Prevalence of Non-malignant breast lump in Ahmadnagar Maharashtra: A prospective study

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Abstract
Background: Breast cancer incidence peaks among women in forties in Asia, whereas in western world it is in sixties. By 2020, breast cancer incidence will overtake cervical cancer as the most common cancer in women in India and 70% of the world's cancer cases will be in poor countries, with a fifth in India.
Aims and Objectives: To study the prevalence of non-malignant breast lump in study population.
Materials and Methods: One hundred and seventy five female patients were studied having breast lumps at Pravara Rural Hospital, Ahmadnagar Maharashtra from October 2015 to December 2016. Fine-needle aspiration cytology (FNAC) was done in each patient to find out the type of nonmalignant lump. Data analysis was performed using IBM SPSS ver. 20 software.
Results: Maximum patients were in the age group of 21-30 years (36%) followed by 31-40 years (24%). Majority of the patients have fibroadenomaas the most common non-malignant lump which was followed by fibroadenosis (17.71%). Intraductal papilloma (4%), benign phylloides (1.71%), traumatic fat necrosis (1.71%), non-caesating granulomatous mastitis (1.71%), chronic non-specific dermatitis (1.71%) were the less common lumps found in present study.
Conclusion: Fibroadenoma and fibroadenosis were themost common non- malignant lumps.

Keywords: non-malignant tumor, fibroadenoma, fine-needle aspiration cytology, fibroadenosis

Introduction

In the present era of increased awareness and fear about malignancy in the general population, and promotion of self breast examination, many patients are presenting to the clinic with history of breast lump, though not without some apprehension. They expect proper guidance and effective treatment from the treating surgeon [1].

Most women experience breast changes, ranging from subtle to alarming, at some time of their lives. The changes depend on age, hormone levels and medicines used. Breast lesions are more common than organ lesions and deserves special care [2].

The greatest increase in incidence of breast cancer has been in Asian countries. The incidence of breast cancer is low in India as compared to developed countries, but the total number of cases and the net mortality is high probably because of the large population, inadequate screening programs, and lack of education [3].

Hence in present study we tried to evaluate the prevalence of non-malignant breast lump in study population.

Materials and methods

One hundred and seventy five female patients were studied having breast lumps who were admitted in the wards or attending surgical outpatient department in the Pravara Rural Hospital, Ahmadnagar, Maharashtra from October 2015 to December 2016.

Written informed consent and Institutional Ethics Committee Approval was obtained from each patient before staring the study.

A detailed clinical history and thorough physical examination was done for each patient. Mammography was used as an integral part of tripple assessment.

All patients presenting to surgery OPD with a palpable breast lump were included in the present study whereas patients in whom there were other breast related complaints but no palpable lump were excluded from the present study.

Complete pre-operative work-up investigations and medical fitness for surgery were obtained. Primary diagnoses were obtained by fine-needle aspiration cytology (FNAC) or other open biopsy procedures.

All the data analysis was performed using IBM SPSS ver. 20 software. Categorical data was expressed as percentage. Cross tabulation and frequency distribution was used to prepare the table and Microsoft excel 2010 was used to prepare the required graph.

Results

Most common age group affected was of 21-30 years [63 (36%)], followed by 31-40 years [42 (24%)].

Fibroadenoma was the most common benign entity in our study (39.43%), followed by fibroadenosis (17.71%). Few less common entities like intraductal papilloma (4%), benign phylloides (1.71%), traumatic fat necrosis (1.71%), non-caesating granulomatous mastitis (1.71%), chronic non-specific dermatitis (1.71%) were also present.

Table 1: Frequency distribution of Non-malignant breast lump

Lump	Frequency	Percentage
Chronic non-specific dermatitis	3	1.71
Acute mastitis	7	4
Breast abscess	13	7.43
Non-caesating granulomatous mastitis	3	1.71
Postoperative/traumatic non-specific inflammation	2	1.14
Traumatic fat necrosis	3	1.71
Fibroadenoma	69	39.43
Fibromatosis	3	1.71
Fibroadenosis	31	17.71
Galactocele	6	3.43
Intraductal papilloma	7	4
Duct ectasia	12	6.86
Benign phylloidestumour	3	1.71
Prominent axillary tail	13	7.43
Total	175	100

Discussion

Breast lesions vary from commonly seen benign condition such as fibroadenoma, to some common carcinomas like infiltrating ductal carcinomas, to the rarer ones like malignant transformation of phyllodes tumor and carcinoid tumors. A lump in breast also evokes a fear of mutilation. Cosmetic consideration, false vanity, hesitation on the part of the lady, psychological disturbances and fear of malignancy hinders the early diagnosis of a breast lump particularly in rural area.

Fewer lumps are discovered by breast self-examination. Fibroadenoma is the most common benign lesions reported by various other researchers in India and other parts of the world.

Benign breast lumps peaked in age group of 21-30 years. In a study by Khanna *et al.* peak incidence of benign breast lumps was in the 21-30 years age group [4]. In the present study, FNAC was a part of routine investigation procedure in all cases. Accuracy of diagnosing benign lumps was 83.33%. In 23.7 % patients FNAC was not conclusive and required biopsy for confirmation. Wani *et al.* had 82% accuracy in the diagnosis [5] Wollenberg *et al.* had 91.3% accuracy in diagnosing breast lumps [6].

In the present study the incidence of fibroadenoma was lesser (39.43%) as compared to the study conducted by Mudholkar *et al.* (87%) [3], Haque *et al.* 1980 [7] (52.88%), and Oluwale *et al.* (48.51%) [8]. The maximum no. of cases (36%) occurred between the age group of 21 to 30 years as contrast to study of Mudholkar *et al.* (40%) who found in age group of 10-20 years [3]. Oluwale *et al.* [8] and Raju *et al.* [9] also observed that the commonest age group was 15-25 years. Khanna *et al.* [4] observed least incidence in 21-30 years. As per Biswas *et al.* [10], fibroadenoma 5 cm or more in diameter is considered as giant fibroadenoma. Giant fibroadenoma is the most common cause of breast enlargement and cause asymmetry of breast in adolescent and young adult female. It can grow to huge proportion and compress the surrounding normal breast tissue. If giant fibroadenoma is diagnosed, surgical excision is necessary.

Seven cases of benign intraductal papilloma were reported which accounted for 4% of all benign neoplasms. Mudholkar *et al.* [3], Khanna *et al.* [4], Goyal *et al.* [11] observed an incidence of 2.5%, 1.7% and 3.34% respectively. Lewis JT *et al.* [12] observed an incidence of 5.3% including all papillary neoplasms out of which solitary papillomas were 4.1% and multiple papillomas were 0.5%. Lewis *et al.* [12] observed a mean age for solitary papilloma to be 55.2 years and for multiple papilloma to be 53.9 years.

In the present study we reported 3 case of phyllodes neoplasm (benign phyllodes of low grade) accounting for 1.71% of all benign neoplasms. The incidence of phyllodes neoplasms was observed by Mudholkar *et al.* [3], 3.97%, Oluwale *et al.* [8] 0.49%, Keelan TA *et al.* [13] 0.5%, Goyal *et al.* 1.54% [11] and Khanna *et al.* 4.3% [4].

A wide variety of breast conditions such as phyllodes tumour, virginal hypertrophy, lipoma, hamartoma, cyst, abscess and carcinoma can result in solitary or multiple giant masses [1] It is important to distinguish these pathological entities preoperatively as the treatment modalities and the prognosis differ quite significantly in these various conditions. Some of the lesions were treated by mastectomy, but some other lesions may require only local excision, aspiration, or conservative management [1, 2].

However the study is small and of cross sectional in nature, large randomized clinical trial is needed to strengthen the present study findings.

Conclusion

As breast carcinoma patients reported to the hospital at late stages, hence the need of screening of breast lumps, education regarding self-examination of breast and medical advice at the earliest to be emphasized. Fewer lumps are discovered by breast self-examination. The finding of fibroadenoma as the most common benign lesions is similar to that reported by other researchers in India and other parts of the world.

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