

# Frequency of Clinically Palpable Breast Lumps in an Urban Medical Center Importance of a Surgeon Run Breast Clinic

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## ABSTRACT

The study of breast diseases and their epidemiology deserves special attention. Another reason that grants special value to the breast diseases is the way it affects women health both physically and mentally. The commonest breast symptom is breast lump. Breast lumps are the most common symptom bringing patient to a breast clinic. They are also the most common cause of serious trouble for the patients keeping in view the increased incidence of breast cancer. This is partially due to increased awareness among females. In this study we detected the frequency of clinically palpable breast lumps and their causes and treatment presenting to the breast clinic of a busy private sector hospital.

**Methods: Study design:** Descriptive case series

**Place of study:** Department of Surgery, Holy family Hospital Karachi

**Duration of study:** 1 year (from July 2020 till June 2021)

**Study population:** All females presenting to the breast clinic within the mentioned period

**Data collection procedure:** All the information was taken by the patient through history. Informed consent was taken for examination. Further investigations according to the triple assessment protocol were done in patients who presented with a lump to ascertain the exact nature and etiology of lump. All the data was then entered in a predesigned proforma.

**Results:** A total of 126 patients presented to the breast clinic in Holy family Hospital. The number of patients presenting with breast lump was just above half of the total patients i.e 66 patients (52%). Out of these 66 patients, majority was benign i.e 53 patients (80%) with malignant lumps accounting for 13 patients, 20% of the total patients with breast lump. 60 (48%) patients presented with symptoms other than breast lump. The most common symptom other than lump was pain followed by nipple discharge, skin diseases etc.

**Conclusion:** Breast lump was the most common symptom in patients presenting to our breast clinic and majority were benign and did not require surgery.

**Keywords:** Clinically Palpable, Breast Lump, Triple Assessment

## INTRODUCTION

Breast diseases are a huge health burden worldwide with about more than half of the female population suffering from some form of breast disease at some stage of her life<sup>[1]</sup>.

Breast related symptoms are fairly common cause of visit to the outpatient department or a general physician encounter. The commonest breast symptom is breast lump. Breast lumps<sup>[2]</sup> Female breast is under constant process of evolution and involution under the influence of hormones throughout the reproductive life. Symptoms of breast diseases are diverse. Mastalgia i.e breast pain and lump are two most common causes of presentation to a breast clinic<sup>[3]</sup>. Other less common but significant symptom is nipple discharge, asymmetry and skin diseases<sup>[4]</sup>. Breast lumps are extremely common, especially in the reproductive age group females. These represent a wide spectrum of diseases apart from malignancy. The commonest cause of a benign breast lump is fibro adenoma<sup>[5]</sup>. Other less common causes are breast abscess, breast cysts, ductectasia and fat necrosis etc<sup>[6]</sup>. Most of the benign lumps require no specific treatment with surgery reserved mainly for large fibro adenomas and breast abscess. About 12% of the patients initially presented with a breast mass end up with a diagnosis of malignancy<sup>[7]</sup>. This shows that although benign causes of a breast lesion are commonest but still thorough evaluation of a breast lump is crucial because breast cancer is the commonest cause of cancer death worldwide<sup>[8]</sup>. Although diagnosis of breast lump is straight forward for a surgeon, determining the etiology is technical and challenging. Therefore, in all breast clinics run by a surgeon triple assessment protocol is followed<sup>[9]</sup>. This includes detailed history assessing all the risk factors of malignancy followed by a comprehensive physical and local examination. After this radiological investigations appropriate for the age group are carried out. After that if required, histopathological evaluation is asked for.

Triple assessment leads to about 98.9% accurate diagnosis regarding nature of the breast lump<sup>[10]</sup>. Duct carcinoma is the commonest malignancy on histopathology<sup>[10,11]</sup>.

The etiology of both malignant and benign breast lumps is multifactorial with genetics and hormonal factors playing a pivotal role in the development of breast carcinoma. Benign breast masses represent a broad spectrum of causes than was previously thought. More females are now showing up with complaints of a breast lump. Some of these women only have generalized nodularity but others have actual lumps requiring prompt evaluation. This better patient turnover is partly thanks to the public awareness campaigns regarding the breast self examination method and partly to the fear of malignancy. Pakistan is said to have the highest incidence of breast cancer in Asia with almost every 9<sup>th</sup> Pakistani woman is likely to have breast carcinoma<sup>[12]</sup>. These alarming statistics are a cause of great apprehension among females. The rationale of this study was to determine the exact statistics of actual breast lump in our patient population so that the actual number of patients requiring surgery can be found out<sup>[13]</sup>. These statistics will also be helpful to relieve the stress among our female patients that not all breast lumps are malignant. It also shows the importance of role of an effective breast clinic in spreading awareness about breast diseases and eliminating undue fear of a breast lump always being malignant.

## MATERIAL AND METHODS

This was a descriptive study and it was performed on 158 patients who attended the breast clinic in the outpatient department of Holy family Hospital, Karachi. All the patients regardless of the age were enrolled in the study. Detailed history and physical examination was carried out by the female surgeon herself. Detailed account of all the risk factors for breast cancer were asked and recorded in the predesigned proforma. These included age, marital status,

parity, menarche, menopause, breast feeding and the use of contraceptives and other hormones. Patients presenting with breast lump were referred to the radiology department for ultrasound (in patients less than 35 years) and bilateral mammogram (in patients more than 35 years). Fine needle aspiration was performed in patients having clinically benign lumps while trucut biopsy was done in clinically malignant lumps. After diagnosis through triple assessment, patients were managed accordingly. Patients with benign breast diseases were managed conservatively along with reassurance. Benign lumps were either managed conservatively by reassuring the patient or were excised. Malignant lumps were managed according to stage by surgery and neoadjuvant or adjuvant therapy.

**RESULTS**

A total of 126 patients attended breast clinic between July 2020 and June 2021. Most were married and having children. Age was stratified into 3 groups: 15-30 years, 31 to 45 years and above 45 years. In our study, most of the patients were between 31 to 45 years. The exact age statistics are shown in figure 1.

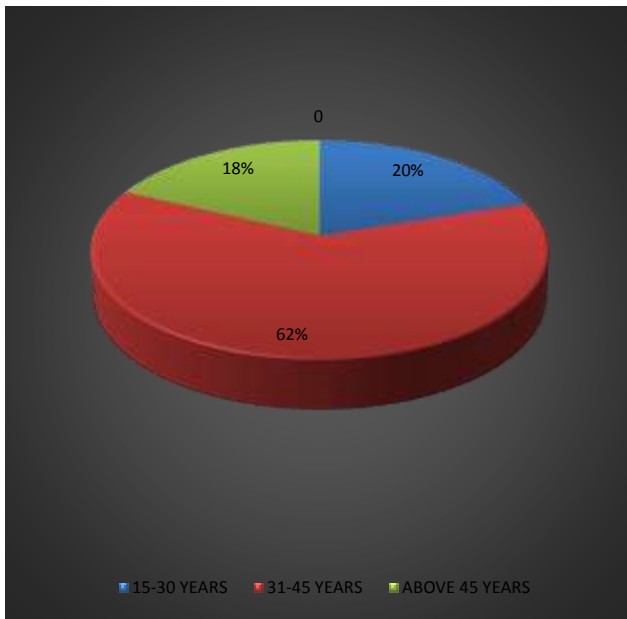


Figure 1: Age Distribution Of Patients Presenting To Breast Clinic

The number of patients presenting with breast lump was just above half of the total patients' i.e 66 patients (52%). Out of these 66 patients, majority was benign i.e 53 patients (80.35%) with malignant lumps accounting for 13 patients, 19.65 % of the total patients with breast lump. 60 (48%) patients presented with symptoms other than breast lump. (see table 1 and 2).

Table 1: Distribution of breast lump versus other symptoms in breast clinic. (n=126)

Symptom	Number	Percentage
Breast lump	66	52%
Others	60	48%

Table 2: Frequency of benign and malignant lumps

Total number of patients with lump	Number of benign lump	Number of malignant lump
66	53	13
	80.35%	19.65%

The most common symptom other than lump was pain followed by nipple discharge, skin diseases etc. These are shown in figure 2.

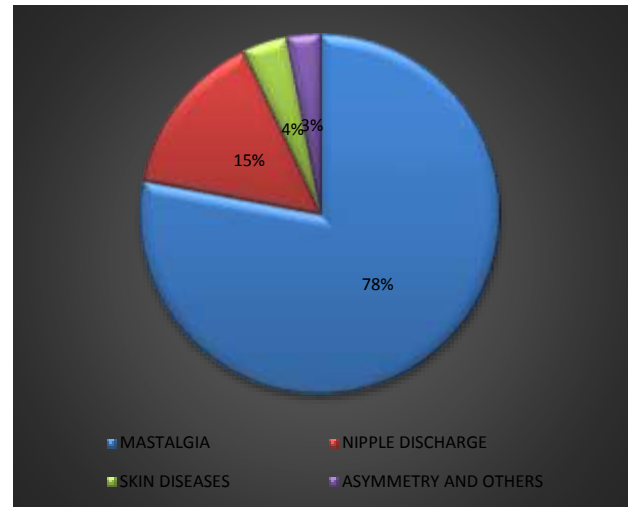


Figure 2: Frequency of Symptoms Other Than Lump

The commonest cause of benign lump was fibroadenoma. Other causes were breast cysts, breast abscess, ductectasia, fat necrosis etc (see figure3)

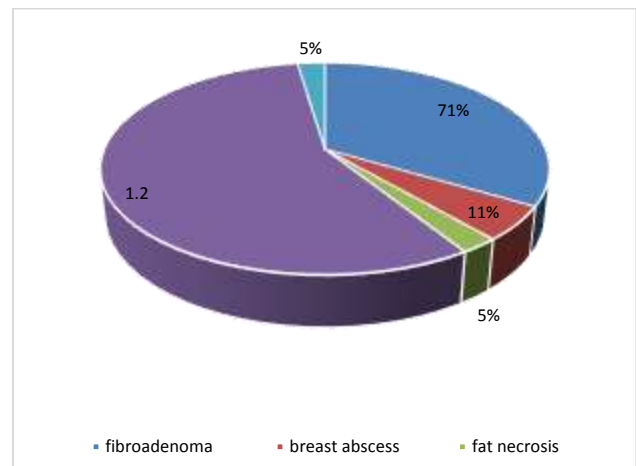


Figure 3: Etiological Distribution of Benign Breast Lump

**DISCUSSION**

Breast diseases are fairly common and breast lumps are the commonest presentation<sup>[14, 15]</sup>. Almost every female of reproductive age group must have experienced some sort of breast discomfort in her lifetime. The age group mostly effected with breast diseases is between 30 to 50 years<sup>[14, 15]</sup>. In our study, 65.26 % were in the age group of 31 to 45 years. Patel at al, conducted a study to evaluate the patters of breast diseases in different age groups<sup>[16]</sup>. In his observation, 70.34% patients were falling in the 20 to 50 year group. The percentage was lowest below 20 year age group (10%) The main reason behind this is the exclusive anatomy of the female breast and the way it undergoes continuous changes in different stages of a woman's life. Breast lumps are a cause of great concern. This is the commonest presentation of breast disease as in our study. Another study conducted in Rawalpindi Medical College in 2013 had similar results<sup>[17]</sup>. They studied 241 patients of breast diseases and 64% has a clinically palpable discrete lump. Although some other studies had mastalgia as the commonest presentation. Breast carcinoma is the leading cause of cancer death in females specially in the developing countries like Pakistan. It has left behind ovarian, uterine and lung cancers<sup>[18, 19]</sup>. It accounts for 26% of the newly diagnosed cancers in females and

15% of cancer related deaths [20]. Therefore, any breast lump suspicious of being malignant must be evaluated thoroughly by means of Triple assessment which gives the most confident diagnosis with accuracy reaching upto 99% [21]. If any component of the triple assessment is positive than cancer is the likely diagnosis. In our study, among all the patients with breast lump, 19.35% patients had carcinoma breast. This is slightly higher than a previous study conducted by N Linagaraju et al, in India in 2016 which found that the percentage of cancer patients was 14% [22]. Fibroadenomas are the commonest benign lumps of the breast. This is also a finding in our study which correlates with previous studies [23]. The percentage of fibroadenomas among breast lumps in our study was 65%. A research study in Nepal was conducted on 100 patients who presented with breast symptoms [24]. Most of the patient had benign breast diseases. A total of 76% had a breast lump which is much higher than our study in which 52% presented with a lump. The percentage of malignancy (20.15%) is however closely matches that of our study. They found out that mastalgia is the second most common reason bringing the patient to the clinic. Our study also supports this finding where out of 60 patients who presented without a breast lump, 43 had cyclical or non cyclical mastalgia. Additionally many patients with fibroadenoma also had some sort of pain but that was not the main presenting symptom. Benign breast diseases are a heterogenous group of diseases encompassing a wide variety of symptoms and etiologies other than lumps. They deserve special attention because of high prevalence and its impact on woman's life. These include fibroadenosis, developmental abnormalities, hyperplasias, nipple discharge etc. Muller conducted a study in which breast diseases other than malignancy were studied. He included 102 patients in the study. The frequency of benign breast disease in his study was 76.84% with most of the patients having fibrocystic disease [24]. The role of a comprehensive, functional and surgeon operated breast clinic can never be overemphasized. This is the cornerstone in the management of breast diseases. Besides having competent surgical team, well equipped staff and radiology department are equally important for effective and smooth running of the breast clinic. Our study highlighted these facts by promptly diagnosing and treating malignancy. Also patient reassurance and saving them from undue fear of malignancy can only be done by knowing the exact statistics and sharing with them.

**CONCLUSION**

The most common symptom in patients presenting to our setup was a breast lump. The discovery of a breast lump by either the clinician or the patient herself is a disturbing occurrence. Most breast lumps are benign and need no surgery. But to eliminate patient fear requires prompt diagnosis and treatment with reassurance in the breast clinic run by an experienced surgeon.

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