



## CLINICO-EPIDEMIOLOGICAL PROFILE OF PATIENTS PRESENTED WITH BREAST LESIONS: AN INSTITUTIONAL ANALYSIS

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### Abstract:

**Introduction:** One of the most common diseases encountered in outpatient department of general surgery unit are breast lesions. 200,000 cases of breast diseases was diagnosed annually. Pattern of presentation of breast diseases varies region to region and race to race. Mastalgia, lump, nipple discharge and skin lesions are the common mode of presentation. Most common benign lesion is fibroadenoma and most common pattern of presentation is lump followed by mastalgia. Every breast mass should be biopsied and properly treated.

**Aim:** To determine the clinical and demographic features of patients with breast lesions.

**Methods and Materials:** This retrospective observational study was conducted in general surgery and surgical oncology unit 2 of Sheikh Zayed Hospital, Lahore, between January 2022 and April 2023. A non-probability convenience sampling technique was used. Data was collected in the form of age, gender, diagnosis, and pattern of presentation in a pre-defined Performa. All the data was analyzed and presented in the form of frequencies and percentages.

**Results:** A total of 89 patients were included in this study. The mean age of presentation in benign breast disease was 29.3 years, and in malignant breast disease, it was 45.5 years. 15/89 (16.85%) patients had malignant breast diseases, whereas 74/89 (83.15%) patients had benign breast diseases. The most common cause of breast swelling was fibro-adenoma (21.34%), followed by carcinoma breast (16.85%). The least common cause of breast swelling was ductal ectasia (1.12%), followed by phyllodes tumor (3.37%). The most common presenting clinical feature of benign breast swelling was breast mass (83.78%), followed by pain (60.81%). The least common associated clinical feature of benign breast disease is an axillary lump (6.57%), followed by nipple discharge (9.45%). The most common clinical feature of malignant breast swelling was breast mass (93.33%), followed by axillary lump (53.33%).

**Conclusion:** Most of the Clinico-epidemiological features of patients with breast lesion are similar with those of previous research. Female is the most common gender presented with breast lesion. The mean age of presentation in benign breast disease was 29.3 years, and in malignant breast disease, it was 45.5 years. Benign diseases are the most common culprit for breast pathology. Fibroadenomas the most common cause of benign breast lesion. Most common clinical presentation of benign and malignant breast lesion is breast mass.

**Keywords:** Breast Cancer, Fibroadenoma, Breast Lump, Fibrocystic disease, Mastalgia

## **INTRODUCTION:**

Breast pathologies are one of the most common diseases encountered in the outpatient department of a general surgery unit(1). It includes inflammatory, vascular, congenital, traumatic, hormonal, benign, and neoplastic causes(2). It was estimated that about 200,000 cases of breast disease were diagnosed annually(3). It is mostly prevalent in females, and the age of presentation varies with the nature of the disease. The pattern of presentation of breast diseases varies from region to region and race to race(4).

There was a wide range of clinical presentations of breast diseases, including mastalgia, lumps, nipple discharge, swelling, and skin lesions(5). Most breast diseases are benign lesions, including fibro-adenomas, fibrocystic breast disease, gynecomastias, accessory breast tissue, phyllodes tumors, Mondor's disease, breast cysts, and mammary fistulae(6). Among all these causes, the most common presentation of breast disease is mastalgia, followed by breast lumps, while the most common lesion is fibroadenoma(7). Which is mostly presented in pre-menopausal women. Breast cancer is a malignant disease of the mammary gland and accounts for about 23% of all diagnosed cancers(8). It is the 5th most common cancer in both genders and the 2nd most common cancer in females(9). The prognosis of breast cancer depends on the stage and grade of the disease at the time of diagnosis. Malignant breast disease is mostly presented as a breast lump(10). The most common site of carcinoma breast is the upper outer quadrant(11). It mostly presents in older females, but for the last 10 years, it has been observed that young females have an increased incidence of breast cancer. Therefore, all the breast lumps should be biopsied to rule out malignancy(12).

Most of the breast lesions were managed with the triple assessment method, which includes a detailed history and clinical examination along with radiological assessment and histopathological evidence (13, 14). Radiological assessment includes ultrasound and mammography. Patients with an age greater than 40 years were usually assessed with mammography, whereas those who were under 40 years were assessed with ultrasound(15). Histo-pathological evidence can be generated by using tru-cut or core-cut biopsies. Management depends on the underlying cause(16).

The most concerning lesions in breast pathology are histologically proven breast cancer masses. In the last 10 years, a lot of studies have been done to determine the preventive strategies, causes, pathophysiology, investigation, and treatment techniques. This not only increases awareness in the general population but also increases anxiety and aggressive psychological behavior towards even benign breast lesions. So this study was conducted to determine the clinical and demographic features of patients with breast lesions. With the hope that it will increase patient awareness that all lumps and swellings are not malignant, and it will also increase literature about the different presentations of benign and malignant breast disease and their current patterns of presentation and epidemiology.

## **METHODS AND MATERIALS:**

This retrospective observational study was conducted in general surgery and surgical oncology unit 2 of Sheikh Zayed Hospital, Lahore, between January 2022 and April 2023. A non-probability convenience sampling technique was used. All the patients with an age greater than 18 years who presented with breast symptoms in the outpatient, inpatient, and emergency departments of general

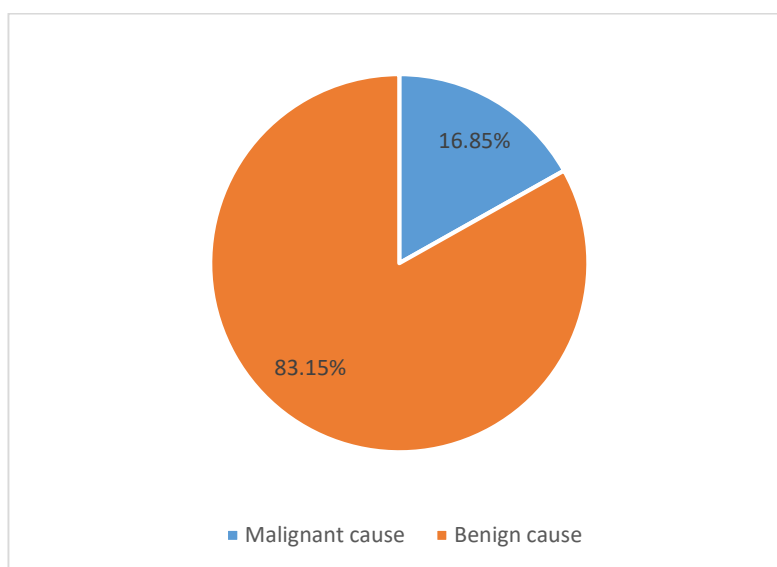
surgery and the surgical oncology unit of Sheikh Zayed Hospital in a defined period were examined in detail along with history-taking. Those who met the inclusion criteria were enrolled in this study. Ultrasound, mammogram, and tru-cut biopsies were done to diagnose the patients. CT scans of the chest and hormonal assessments were done when required. Baseline investigations were done in all patients.

Data was collected in the form of age, gender, diagnosis, and pattern of presentation in a pre-defined Performa. All the data was analyzed and presented in the form of frequencies and percentages.

**RESULTS:**

A total of 89 patients were included in this study. Female was the most common gender presented with breast diseases. Gynecomastia was the only disease seen in male patients, along with one male patient diagnosed with breast carcinoma. The mean age of presentation in benign breast disease was 29.3 years, and in malignant breast disease, it was 45.5 years.

15/89 (16.85%) patients had malignant breast diseases, whereas 74/89 (83.15%) patients had benign breast diseases. As shown in fig 1.0



The most common cause of breast swelling was fibro-adenoma (21.34%), followed by carcinoma breast (16.85%). The least common cause of breast swelling was ductal ectasia (1.12%), followed by phyllodes tumor (3.37%). Other causes include fibrocystic disease (11.23%), gyneco-mastia (4.49%), breast abscess (7.86%), accessory breast tissue (4.49%), and mastitis (8.98%), as shown in

**Table 1.1** below.

Causes of Breast Diseases		
Diagnosis	Frequency (n)	Percentage (%)
Fibro-adenoma	19	21.34%
Phyllodes tumor	3	3.37%
Fibro-cystic disease	10	11.23%
Gynaeco-mastia	4	4.49%
Ductal ectasia	1	1.12%
Breast abscess	7	7.86%
Accessory breast tissue	4	4.49%
Lipoma	4	4.49%
Mastitis	8	8.98%
Mastalgia	14	15.73%
Carcinoma breast	15	16.85%
Total	89	100.00%

The most common presenting clinical feature of benign breast swelling was breast mass (83.78%), followed by pain (60.81%). The least common associated clinical feature of benign breast disease is an axillary lump (6.57%), followed by nipple discharge (9.45%). The most common clinical feature of malignant breast swelling was breast mass (93.33%), followed by axillary lump (53.33%). as shown in Table 1.3.

Pattern of Presentation				
Clinical Features	Benign Diseases (74/89)		Malignant Diseases (15/89)	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
Pain	45	60.81%	5	33.33%
Breast mass	62	83.78%	14	93.33%
Tender swelling	10	13.51%	1	6.66%
Nipple discharge	7	9.45%	6	40.00%
Axillary lump	5	6.75%	8	53.33%
Erythema	9	12.16%	1	6.66%

## DISCUSSION:

Throughout the life of a female, the breast passes through various phases of development, including the maturation phase, the reproductive phase, and the involutionary phase. When the normal physiology of any phase gets exaggerated or depressed, it will be explained as a disorder(17).

The study showed that most of the patients with benign breast diseases were young, with a mean age of 29.3 years. Similarly, a study by Trupati et al. showed that most of the patients with benign breast diseases were in the age range of 21 to 30 years(18). A research study by Gupta et al. also showed that most of the patients with benign breast disease were in the age range of 20–30 years(19). These results were comparable to those of our study. A study of 75 patients showed that most of the patients with benign breast swelling presented in the age range of 15–35 years(20).

Our study showed that most of the patients with malignant breast disease presented with a mean age of 45.5 years. A study of 100 patients showed that most of the patients with breast carcinoma presented with age ranges of 41–45 years. These results were comparable with ours. Similarly, a study of 2192 patients with breast carcinoma showed that the median age of patients with breast cancer was 50 years(21). Another study of 171 patients with breast carcinoma showed that the mean age of patients with breast cancer was 49 years. These results were also comparable to our study(22).

The author found that the most common cause of benign breast disease in our research was fibro-adenoma (21.34%), followed by fibro-cystic disease (11.23%). Patients with breast cancer account for 16.85%. A study of 80 patients, Akshara Gupta at EL, showed that the most common cause of benign breast diseases was fibro-adenoma, followed by cyclic mastalgia, fibro-adenosis, or fibro-cystic disease(19). These results were comparable with ours. Similarly, a study of 50 patients showed that the most common cause of benign breast diseases was fibro-adenoma, followed by fibro-adenosis or fibro-cystic disease(18). A study of 138 patients showed that the most common cause of breast lumps was breast cancer, followed by fibroadenoma. The result of this study contradicts ours(23). A study of 100 patients showed that the most common cause of breast lumps was fibro-adenoma, and breast cancer accounts for 19%. These results were comparable with ours(24).

Our study showed that most of the patients with benign breast swelling had an underlying mass (83.78%). The most common pattern presentation in benign breast swelling was mass, followed by breast pain (60.81%). The least common pattern of presentation in benign breast disease was an axillary lump followed by erythema. A study showed that the most common mode of presentation in benign breast diseases was pain, followed by a breast lump(19). Similarly, a study of 50 patients showed that the most common mode of presentation in benign breast diseases was lump (58%) followed by pain (16%). These results were comparable with ours(18).

The author found that in our research, the most common presentation of malignant breast swelling was breast mass (93.33%), followed by axillary lump (53.33%). A study of 50 patients showed that the most common presentation of malignant breast disease was a lump (100%), followed by pain. These results were comparable to ours(25).

### CONCLUSION:

Most of the Clinico-epidemiological features of patients with breast lesion are similar with those of previous research. Female is the most common gender presented with breast lesion. The mean age of presentation in benign breast disease was 29.3 years, and in malignant breast disease, it was 45.5 years. Benign diseases are the most common culprit for breast pathology. Fibro-adenomas the most common cause of benign breast lesion. Most common clinical presentation of benign and malignant breast lesion is breast mass.

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