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A CLINICOPATHOLOGICAL STUDY OF 114 BREAST LUMP CASES AT A TERTIARY CARE HOSPITAL

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Abstract

Background: Breast undergoes physiological and pathological changes during puberty, menstruation, pregnancy, lactation and menopause. Common Breast diseases are fibroadenoma and carcinoma with rarer entities such as tubercular mastitis and phyllodes tumour.
Aim:1) To study breast diseases in female presenting with lump2) To correlate with pathological findings.
Materials And Methods: This retrospective study for period of 1 year January to December 2024 conducted in department of general surgery, tertiary care center–Vikarabad. 114 female patients presented with lump in breast included. Besides history, clinical examination the diagnostic evaluation included FNAC, USG, mammography and biopsy. All patients were managed surgically.
Results: Out of 114 breast lump cases ,110 cases were non- malignant and 4 cases malignant. The benign conditions were fibroadenoma105 cases with common age of 20-30 years followed by fibrocystic disease 3 cases of age 20-25 years. Tubercular mastitis 2 cases of age 35 – 40 years. The rest were infiltrating ductal carcinoma 2 cases age 35 - 40 years and phyllodes tumour 2 cases age 45 - 65 years.
Conclusion: The pattern of breast diseases provides information concerning clinicopathological profile of breast lump disease. The clinical diagnosis of breast lump must be correlated with histopathological diagnosis for adequate treatment of patient which will help to cure patients at earlier stage.

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Introduction: -

Breasts or mammary glands in the females can be considered as a distinguishing and unique feature of mammals [1]. They are a part of secondary sexual characters and have a significant role to play in the reproductive life of a patient [2].

Breast is a glandular organ influenced by hormones in females with various structures giving rise to different types of lesion and lumps [3]. It undergoes physiological and pathological changes during puberty, menstruation,

pregnancy, lactation and menopause [4]. Common Breast diseases are fibroadenoma and carcinoma with rarer entities such as tubercular mastitis and phyllodes tumor.

Benign disorders of the breast are thought to be largely hormone induced and there is a dramatic fall in the incidence after menopause due to cessation of clinical ovarian stimulation [5]. Benign breast Diseases is defined as any non-malignant breast condition and encompasses a wide range of clinical and pathological disorders.1 It is one of the most common diseases in the females of any society. Up to 30% of women suffer from BBD in anytime of their life and this compels them to take the treatment.

In the present era of increased awareness and fear about malignancy in general population and promotion of self breast examination many patients are presenting to the hospital with history of breast lump [6]. Breast lumps are one of the most common reason for surgical consultation. Lump more than 1 cm in diameter is palpable. It takes 3 years for a tumor to attain this size from a single cell stage estimated by tumor doubling time [11].

Accurate history and clinical evaluation are still most important methods of detecting breast disease. A number of investigations are also now a useful guide in this scenario. Triple assessment, which includes clinical examination, imaging and histopathological examination is considered a gold standard approach to the diagnosis of breast lump. Early diagnosis and prompt treatment will avoid unnecessary surgery and patient's anxiety of having breast lump as carcinoma will be relieved[12]. The prognosis of breast lump is difficult to express especially in malignancy where many factors influence the result.

This study is undertaken for a better understanding of breast lump which will help to give proper treatment to achieve better outcome and to create awareness that every breast lump is not cancer.

Aims and Objectives of the Study: -

1) To study the breast diseases in female presenting with lump.
2) To correlate with the pathological findings.

Materials and Methods:-

It is retrospective study for a period of 1 year from January to December 2024 conducted in the department of general surgery, Tertiary care hospital– Vikarabad. Data for the study collected from the case sheets and records.

114 female patients presented with lump in the breast were included. Besides history and clinical examination the diagnostic evaluation included FNAC, USG, mammography and biopsy. All patients were managed surgically.

Inclusion Criteria

1. Female patients operated for palpable lump in the breast
2. Age group from 16years-65years

Exclusion Criteria

1. Lactating females
2. Breast abscess cases

Results:-

In this study, Out of 114 breast lump cases ,110 cases were non- malignant and 4 cases malignant (Table no.1).The benign conditions were fibroadenoma 105 cases with common age group of 20-30 years followed by fibrocystic disease 3 cases of age group 20-25 years. Tubercular mastitis 2 cases of age 35 - 40 years. The rest were infiltrating ductal carcinoma 2 cases of age 35 - 40 years and phyllodes tumour 2 cases of age 45 - 65 years (Table no.3).

Youngest patient included in the study was 16years (Fibroadenoma) and the oldest 65years (Malignant phyllodes).

Table no. 1:- Number of breast lump cases.

Breast lumps	**Number**
Non-malignant cases	110
Malignant cases	4

Total	114

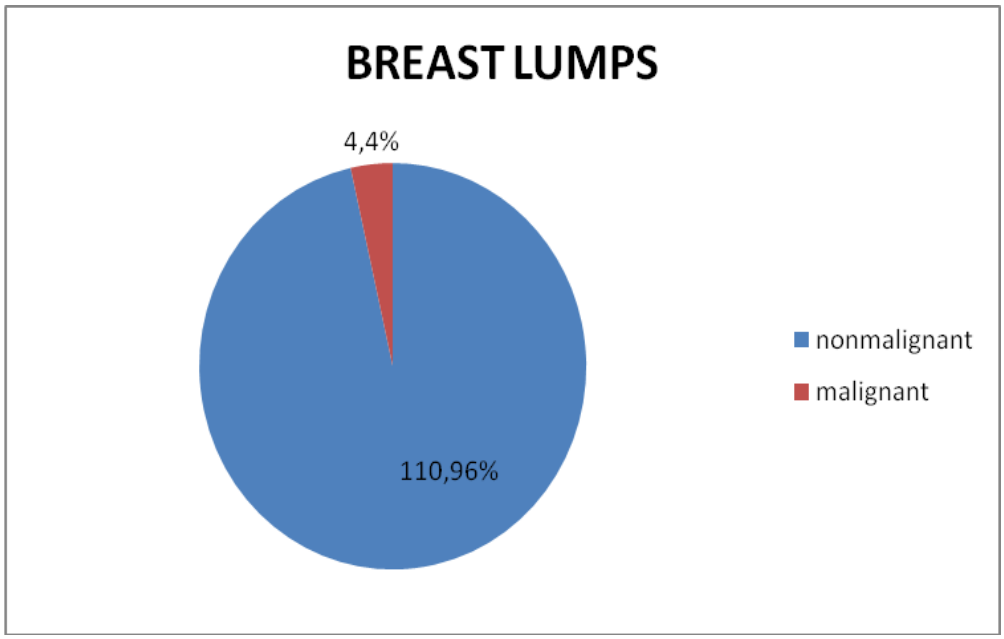

Figure no. 1:- Malignant and non malignant breast lump.

In the study of total 114 breast lump cases 110 were non-malignant accounting for 96% of the cases being benign and 4 were malignant with 4% of cases malignant (Figure no 1).

Table no. 2:- Number of breast lump diseases.

Breast lump diseases	**Number**
Fibroadenoma	105
Fibrocystic disease	3
Tubercular mastitis	2
Infiltrating ductal carcinoma	2
Malignant phyllodes	2
Total	114

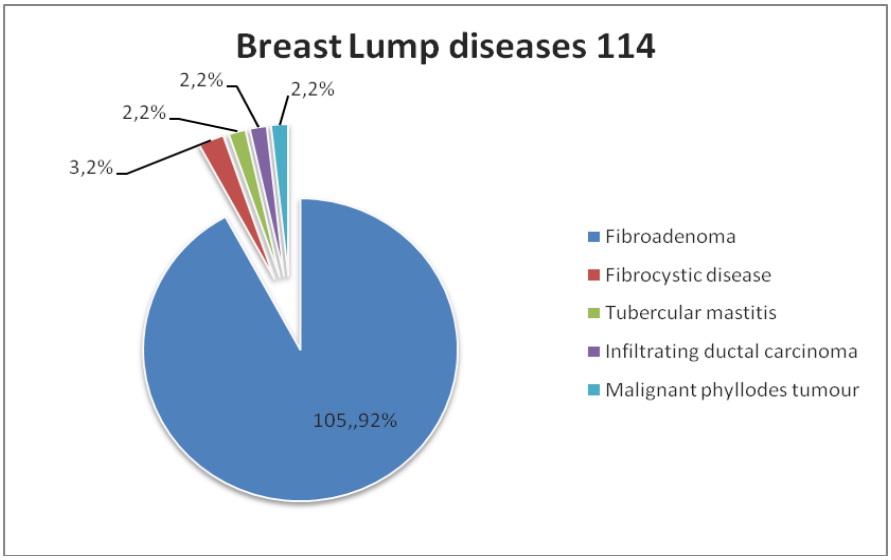

Figure no. 2:- Number of breast lump diseases.

In the study there were 105(92%) cases of fibroadenoma,3 (2%) cases of fibrocystic disease,2(2%) cases of tubercular mastitis,2(2%) cases of tubercular mastitis,2(2%) cases of infiltrating ductal carcinoma,2(2%) cases of malignant phyllodes tumor (Figure no 2).

Table no. 3:- Age distribution of breast lumpscases.

	<20yrs	**21-30yrs**	**31-40yrs**	**41-50yrs**	**51-60yrs**	**>60yrs**	Total
Fibroadenoma	3	36	29	28	8	1	105
Fibrocystic disease		3					3
Tubercular mastitis			2				2
Infiltrating ductal carcinoma			2				2
Malignant phyllodes				1		1	2
Total	3	39	33	29	8	2	114

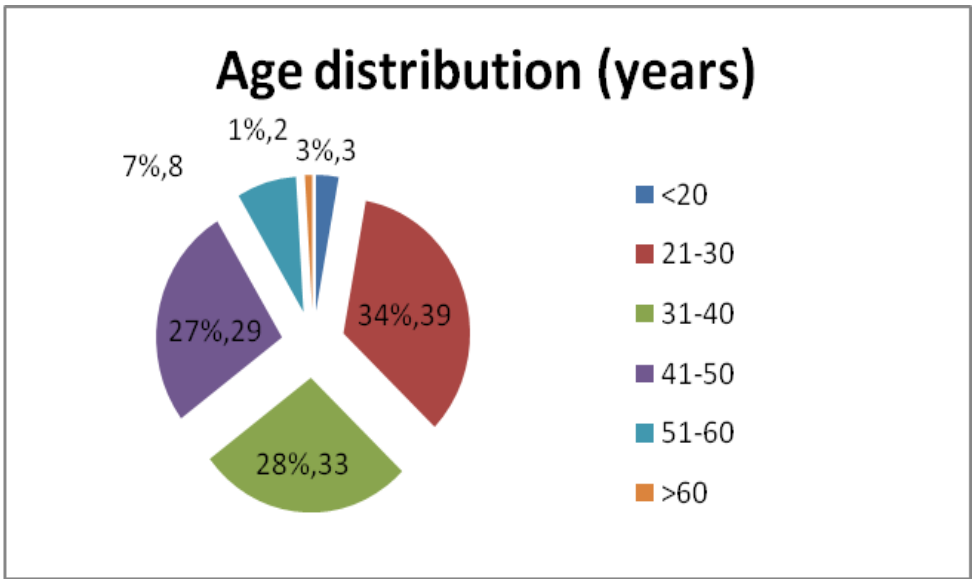

Figure no. 3:- Age distribution of breast lump cases.

In the present study majority of the patients were between age group 21-30yrs (Figure no 3).

Discussion: -

Benign Breast disease is the most common cause of breast problems , upto 30% of women will suffer from a Benign Breast disorder requiring treatment at some time in their lives. The most common symptom are pain and a lump. The aim of the treatment is to exclude cancer and once this had been done ,to treat any remaining symptoms. There will always be situation in which clinician cannot be sure whether a particular lump in breast is an area of mammary dysplasia, benign tumour or early carcinoma. If there is doubt on clinical , cytological or radiological examinations essential to obtain tissue diagnosis. This is often possible by needle biopsy if negative open biopsy/histopathological confirmation[7].

Benign breast diseases include a heterogeneous group of conditions which range from normal, to aberrations in the physiology, to frank disease. The patients of BBDs generally present with one or more of these complaints breast lump, breast pain or nipple discharge. It has been recommended that all the patients with discrete breast lumps should undergo a triple assessment to make an early diagnosis[1].

In the present study, most of the patients belong to age group of 20-30years with age group(Figure no 3) ranging from 20-40years for benign cases and 35-65 years malignant cases.

114 breast lump cases were studied ,110 cases (96%) were nonmalignant and 4 (4%) cases were malignant (Figure no 1).Divyasree Neeli concluded in the Clinicopathological study of Breast lesions over a period of one year in tertiary care center that out of total 185 cases of breast lesions,151 cases (81.62%) were diagnosed as non-malignant ,34 cases were malignant (18.37%)[8].

Among 96% benign breast lump cases, 92% were fibroadenoma in our study. Abhijit S Rayk at al concluded in his Clinicopathological study and management of Benign breast diseases in females including 100 cases over 1 year that Benign breast diseases are more commonly seen in 15-30 yrs age ,breast lump being commonest presentation and Fibroadenoma as the commonest diagnosis amongst all[9].

M Kumar et al (2010) asserted that in Indian rural population the benign breast disease are 5 to 10 times more common than breast cancers[10].

Akit sahu et al(2019) concluded in his study of Epidemiological study of breast lump cases that fibroadenoma was the most common cause(40.98%) of benign lumps[6].

Marta Román et al (2022)concluded in his study of Long-Term Risk of Breast Cancer after Diagnosis of Benign Breast Disease by Screening Mammography which provided evidence of the long-term nature of risk of breast cancer after diagnosis of benign breast disease by screening mammography. The increase in risk was sustained for at least 20 years after diagnosis, and affected women of all ages as well as to all years at index mammogram. Their results also showed that women who had a proliferative benign disease had a higher long-term risk than those with non-proliferative disease. Women with diagnosis of benign breast disease could benefit from closer surveillance[16].

Yugantara R. Kadam et al (2016) found in his study of Barriers for Early Detection of Cancer Amongst Urban Indian Women: A Cross Sectional Studythat Almost half of the respondents (53.43%) said they knew symptoms of breast cancer. Most common symptom known to them was breast lump (57.78%) followed by changes in the skin over breast (21.08%), discharge through nipple (13.88%), change in the shape or site of nipple (7.02%) and lump in axilla (2.10%). Majority, 76.25%, had positive response regarding early detection of breast cancer. According to 66.25% of respondents, early detection leads to complete cure [13].

BBD subtypes are epithelial proliferation with atypia (ie, atypical hyperplasia), epithelial proliferation without atypia (ie,hyperplasia), adenosis (including sclerosing adenosis), papilloma, calcifications,fibroadenoma, FCCs(eg, fibrosis and cystic fibroadenosis), cysts, inflammation (chronic and granulomatous), and nonepithelial tumors (eg, lipoma) Hormonal factors (ie, reproductive and lifestyle factors that affect hormonal exposure, including exogenous hormone use) are known to affect woman's breast cancer risk. Factors such as early menarche, regular and short menstrual cycles, nulliparity, older age at first birth, use of oral contraceptives and hormonere placement therapy (HRT), and high postmenopausal body mass index (BMI) are associated with higher breast cancer risk, whereas longer breastfeeding duration and higher premenopausal BMI are associated with a reduced risk, a history of certain BBDs is also a risk factor for breast cancer; benignproliferative disease with or without atypia increases the risk approximately 4-and 2-fold, respectively, whereas it is less clear whether nonproliferative diseases affect therisk. In addition, family history of breast cancer influences the risk of breast cancer after a BBD diagnosis, and the risk may be further elevated in younger women. Therefore, it is important to improve the understanding of benign vs malignant breast diseases for breast cancer risk assessment [15].

Rajkumar et al (2017) concluded from the study of Clinico-Pathological Study and Management of Benign Breast Lesions that the commonest benign breast lesion encountered in clinical practice is fibroadenoma followed by fibroadenosis. Benign breast disease presents mainly 15 -30 year of age group. The most common age group affected was 21-30 years. The commonest mode of presentation in patients with BBDs was Lump followed by lump with pain in the breast. It can be diagnosed clinically and confirmed by FNAC in more than 90% of the cases. Excision is the mainstay of treatment [14].

In this study Excision of the breast lump was done for benign diseases with antitubercular treatment for tubercular mastitis. Modified radical mastectomy was done for carcinoma and skin sparing mastectomy and simple mastectomy for malignant phyllodes.

S. Selvakumaran et al (2017) concluded in his study of various benign breast diseases that The age of the patients influenced the nature of benign lesions. Fibroadenoma (55.9%) was the most common, in this age group 15-25 years followed by fibroadenosis (20.8%) in the age group of 25-35 years. Inflammatory lesions formed 7.1%. Tuberculosis mastitis, although very low in sites of incidence continues to occur. Anti-tuberculous therapy lesion is the mainstay of treatment, with surgery being the last resort. The majority of patients presented with a lump of about 50%, next common was lump associated with pain 34.5%, only a few complained of pain alone 14.2%.. FNAC were the most useful and most effective investigation; sensitivity 89.6%, specificity 87.8% and accuracy 94.2%. USG and mammography were additional tools to FNAC and clinical evaluation. Breast self-examination and education to females is very important in cases of benign breast tumors as well, as they are common source of anxiety and worry. Reassurance is the first step in treating benign breast lesions. Hence, in a country like ours, education regarding breast self-examination and proper follow up is highly recommended so that early treatment is sought [10].

Dupinder Kaur et al concluded in his study of Triple assessment in Diagnosis of Benign Breast Diseases: An Institutional Study that the overall clinical breast examination had senstivity of 90% and spececficity of 98%. Overall radiological breast examination had senstivity of 86.6% and specificity of 97.2%. Whereas the combination of clinical and radiological examination had an overall senstivity of 93.35 and specificity of 98%. When clinical, radiological and pathological examinations were combined together, the diagnostic accuracy approached 100%. Henc clinical, radiological and pathological examination is essential to give reassurance about the benign nature of the disease, remove the anxiety of harbouring malignancy and also helping her in diagnosing the pattern of benign breast lesions.[17]

Conclusion: -

The pattern of breast diseases provides information concerning clinicopathological profile of breast lump disease.

The clinical diagnosis of a breast lump must be correlated with histopathological diagnosis for correct and adequate treatment of the patient which will help to cure patients at earlier stage.

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