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ORIGINAL ARTICLE

INCIDENCE RATE OF PALPABLE BREAST MASSES AMONGST FEMALE POPULATION IN PATIALA DISTRICT - A HOSPITAL BASED STUDY

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ABSTRACT:
Background: Breast cancer is the still a most common dreadful female cancers worldwide irrespective of the country's developmental status. This study aims to evaluate the pattern of various palpable breast masses amongst female population presenting in Rajendra Hospital, Patiala and to calculate the incidence of benign and malignant cases amongst them. **Materials and Method:** A prospective study was conducted in which patients were selected from the out patient department of Rajendra Hospital between the years 2013-2014. A complete clinical, radiological and histological examination was done and the collected data was organised. The incidence rates of various masses were calculated and plotted in a graphical manner. **Result:** A total of 210 patients were examined between the ages of 21- 80 years. Majority of cases were diagnosed with benign breast masses. The most common disease came out to be fibroadenoma of breast. **Conclusion:** From this study it can be concluded that majority of masses are benign and can be treated if early diagnosis is made. The survival rate of females with malignant lesions can also be increased with timely screening and early diagnosis.
Keywords: Breast cancer; Fibroadenoma; Incidence; Prospective.

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INTRODUCTION

Cancer of breast is a disease that instils feeling of dread and fear in many women. Not only it is a life threatening disease, but affects a part of body that is central to women's sense of womanliness and feminity.[1] Breast cancer is the most commonly occurring female cancer in the world (globally) with an age standardised rate (ASR) of 39 per 100,000.[2] In India it is the most common site for cancer after cervix and uterus.[3] Over 100,000 new cases of breast cancer are estimated to be diagnosed annually in India.[4,5] The ASR varies from region, ethnicity, and religion and is reported to be highest in Parsi community in Mumbai.[6] Due to lack of awareness programmes, paucity of medical facilities in rural areas, increased illiteracy rates, majority of women in Indian subcontinent present with advanced breast cancer. The incidence rate is as high as 70%.[3] This has lead to increased mortality rate in Indian subcontinent.[7] Whereas due to widespread avaliabilty of mammographic programs in western countries there has been a shift towards the diagnosis of clinically occult and non palpable lesions.[8] This has lead to increased incidence rates of breast cancer in developed countries.[9] As majority of cases are diagnosed earlier, there has been a decrease in mortality rate. Majority of breast cancer patients in western countries are postmenopausal and in their sixties and seventies whereas the picture is different in India with premenopausal patients constituting about 50% of all patients. During 2002-2006, 95% of new cases and 97% of breast cancer deaths occurred in women aged 40 years or older. Breast cancer begins in breast tissue, which is made up of glands for milk production, called lobules, and the ducts that connect lobules to the nipple. The remainder of the breast is made up of fatty, connective, and lymphatic tissue.[10] Various modifiable and non modifiable risk factors are involved in breast cancer. Non modifiable factors include age, family history, early menarche, breast density. Others like Birth control pills[11], breast feeding[12], hormone replacement therapy[13], age at first child can be modified and thus breast cancer can be prevented if proper precautions are taken. In this study we aim to evaluate the pattern of various palpable breast masses amongst female population presenting in Rajendra Hospital, Patiala and to calculate the incidence of benign and malignant cases amongst them.

MATERIALS AND METHODS

A prospective hospital based study was conducted in the Government Medical College, Patiala. All the female patients reporting to the out patient department of Rajendra hospital and government medical college, Patiala with the chief complaint of lump in the breast were included in the study irrespective of the age of the patient. A total of 210 patients were enrolled for the study in the time period of 1 year. The diagnosis was made as per the triple assessment which included clinical assessment, imaging studies and tissue studies. A complete clinical examination was done of the breasts, chest, axillae and regional lymph nodes. Patient was examined both in supine and upright position using triple touch technique i.e. palpation was done in superficial, intermediate and deep tissue planes. Various types of imaging studies were performed for detection and diagnosis of lump. It included mammography screens for detection of any occult malignancy, ultrasonography for detection of any cystic mass and MRI. Tissue studies included FNAC using 22 to 26 gauge needle. Excisional biopsy was performed for evaluating breast masses. It was performed under local or general anaesthesia depending on the size of lesion. The obtained data was analysed and incidence rates were calculated as per the formula

Incidence: =

$$\frac{\text{new cases of carcinoma breast}}{\text{total cases presenting with palpable lump}} \times 100$$

All the reports were segregated based on the presence or absence of malignancy and on the basis of type of palpable mass.

RESULT

During the period of July 2013 and June 2014; a total of 210 patients reported with a lump in the breast at Rajendra Hospital with the age range of 21-80 years. The mean age was 48.42 ±12.79 years. Table 1, graph 1 illustrates the distribution of benign and malignant breast lump. Out of the 210 patients examined, incidence of carcinoma breast in patients presenting with palpable lump came out to be 27.6 (58 patients had carcinoma breast out of 210 patients rest 152 cases were benign). Table 2, graph 2 showed that most cases found in the present study were fibroadenomas (incidence 35.7, 75 patients out of 210). Among the other patients, 18 had fibrocystic changes (incidence 8.6), 37 had inflammatory lesions (including mastitis and breast abscess, incidence 17.6), 11 had benign cysts (incidence 5.2), 5 had lactation changes (incidence 2.4), 5 had lipoma (incidence 2.4) and 1 patient had phylloides tumour (incidence 0.5).

Table 1: Distribution of benign and malignant breast lump (n=210)

Diagnosis	No. of Patients	Percentage
Benign	152	72.4%
Malignant	58	27.6%
Total	210	100%

Graph 1: Distribution of benign and malignant breast lump

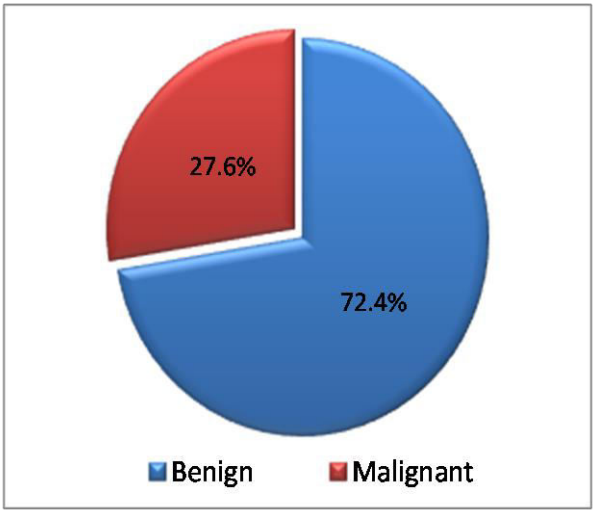
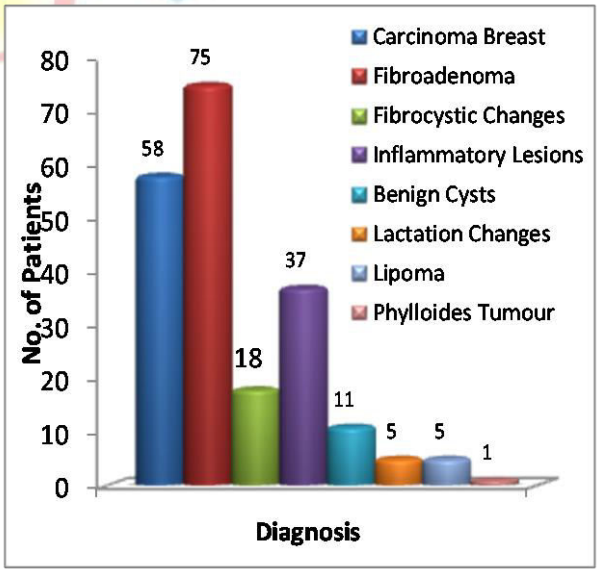


Table 2: Diagnosis of palpable breast lump (n=210)

Diagnosis	No. of Patients	Percentage
Carcinoma Breast	58	27.6%
Fibroadenoma	75	35.7%
Fibrocystic Changes	18	8.6%
Inflammatory Lesions	37	17.6%
Benign Cysts	11	5.2%
Lactation Changes	5	2.4%
Lipoma	5	2.4%
Phylloides Tumour	1	0.5%
Total	210	100%

Graph 2: Diagnosis of palpable breast lump



DISCUSSION

Cancer continues to be the most common health problem that plagues our civilization and the current data ensures the increasing importance of the subject. In urban areas

of developing countries, breast cancer is the most common cancer in women and due to increase in life expectancy, urbanization, and western lifestyles; the incidence has been rising up in low- and middle-income countries steadily in the last few years. Incidence of carcinoma breast in our study came out to be 27.6, against the national incidence of 22.9.[14] Thus it is clear that incidence of carcinoma breast in India is increasing and it is an alarming situation. Only few regional studies are available regarding the incidence rates of breast carcinoma in India. The rates vary probably due to local-regional factors and genetic factors. According to Agarwal et al,[15] incidence rates in India vary from 6.2 to 39.5 in different regions of the country. Puri et al[16] found that the age standardized incidence rates in India vary from 9 - 28.6% per 100,000 women in different regions of the country. In a study by Wani et al,[17] the age-standardized incidence rates varied between 9 and 32 per 100,000 women. In metropolitan cities, incidence is higher, nearly three times, compared to rural India. In Bangalore, Chennai, Delhi, Mumbai and Kolkata, the age-adjusted incidence rates are 30.9, 33.0, 31.4, 29.3 and 20.6 per 100,000 while the rates are much lower in rural areas such as the non-urban Ahmedabad district and Barshi (9.2 and 9.4 per 100,000). It is as high as 39.5 in Union territories like Chandigarh.[18] The most common type of breast mass came out to be fibroadenoma in our study. According to WHO, NOS is the most common type of invasive carcinoma in breast comprising between 40% and 75% in different published series followed by invasive lobular carcinoma in 5-15% cases. In various studies conducted by Rosen et al , Ellis et al , Page and Anderson , invasive ductal carcinoma, NOS came out as the most common invasive carcinoma of the breast followed by invasive lobular carcinoma. Raina et al observed invasive ductal carcinoma in most (92.8%) of the patients followed by invasive lobular carcinoma (2.9%) and medullary carcinoma (1.4%).[19] In India, Incidence rates are increasing over the time. India faces a potential breast cancer epidemic over the next decade as women adopt western lifestyles by marrying and bearing children later in life, nursing fewer children and weaning them earlier, and altering hormone flows.[20] Studies indicate that as India is becoming westernized, the incidence rate for breast cancer is increasing. Incidence rates in western countries at present are 3 times more (66.4) than that of India.Though incidence of carcinoma breast is increasing, more problematic issue is that majority of cases present to hospital in late stages of the disease leading to an increase in mortality rate. Undoubtedly breast cancer will become an epidemic in India in another 10 years, if the current status of detection, diagnosis continues. As there is no exact etiological agent for breast cancer, early diagnosis and treatment is of paramount importance in improving the morbidity and mortality status. It has also been cited and validated in many studies that early detection reduces mortality by 30 %.[21,22]

CONCLUSION

Incidence of carcinoma breast in patients presenting with palpable lump coming to Govt. Medical College and Rajindra Hospital Patiala, Punjab is 27.6 per 100 females, as per the present study. Thus a large proportion of patients presenting with palpable lump could be carcinoma breast. Incidence of carcinoma breast is increasing and it has attained an alarming situation. Early steps are needed to overcome this epidemic of the future.This increase can be related to increasing westernization among the Indian population. Genetic factors also play an important role. Most important point is that majority of Indian carcinoma patients present in late stages of the disease due to lack of awareness, poor breast self examination, and poor screening facilities in the country. An increased five year survival and low mortality rate depends on early presentation. If we cannot prevent the cancer as there is no exact etiological agent, at least we can detect the disease at an early stage. Thus screening is the key for early detection of cancer.

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