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ORIGINAL ARTICLE

Histomorphological assessment of breast lesions

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ABSTRACT:

Background: In India, 20 out of every 100,000 women will be diagnosed with breast cancer, which ranks as the second most frequent cancer after cervical cancer. The present study evaluated the histomorphological spectrum of breast lesions in young females. **Materials & Methods:**280 females <30 years old with breast lesions were enrolled. The site of breast lesions were recorded. Histopathological examination was performed by standard procedures using 10% formalin, paraffin embedding and staining by H&E methods. **Results:** Benign breast lesions found to be breast abscess in 92, accessory breast in 2, fibroadenoma breast in 32, fibroadenomatosis in 18, benign breast lesion in 56, lipoma in 30, granulomatous lesion in 8, benign fibrous histiocytoma in 6 and tubular adenoma in 6 cases. The difference was significant (P< 0.05). Malignant lesions were invasive ductal carcinoma breast in 11 and proliferative breast disease with atypia in 19 cases. The difference was significant (P< 0.05). The site of breast lesion was upper outer Quadrant in 120, lower Outer Quadrant in 52, Upper Inner Quadrant in 48, Lower Inner Quadrant in 24, Central Quadrant in 20 and Whole Quadrant in 16 cases. The difference was significant (P< 0.05). **Conclusion:** The majority of cases had benign lesions rather than malignant ones. Benign breast lesions and breast abscesses were frequent lesions. The upper outside quadrant was the common site.

Key words: Breast lesions, Histopathological, Whole Quadrant

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INTRODUCTION

In India, 20 out of every 100,000 women will be diagnosed with breast cancer, which ranks as the second most frequent cancer after cervical cancer. Worldwide, breast lesions are the primary source of illness and death for women, with very few cases reported in men. Patients with palpable lumps present because developing countries do not undertake breast screening. On the other hand, benign breast lesions outnumber malignant ones.[1]

Globally, breast cancer is the most prevalent cancer type among women. In the United States, the incidence and mortality rates of invasive breast cancer were 124.9 and 25.5 per 100,000 women, respectively, in 2002. In Europe, it remains the second most frequent cancer.[2] Approximately one-third of all malignancies in females are breast cancers. 30.9.2 is the crude incidence rate and 53.8 is the age standardized incidence rate (ASR) worldwide per 100,000. When compared to inflammatory and malignant breast disorders, benign breast diseases are more common. Patients present with advanced disease because of a lack of knowledge and education. The cause and pattern of breast illness vary throughout nations.[3]

The types of breast neoplasms vary. Compared to benign tumors, malignant breast lesions are less frequent. Breast benign lesions typically appear in the second decade of life. Frequent benign lesions of the breast include tubular adenoma, lactating adenoma, phyllodes tumor, and fibroadenoma.[4] Fibrocystic disease, granulomatous mastitis, and inflammatory lesions like breast abscesses are examples of benign proliferative lesions. Melanogenic lesions include medullary cancer, ductal carcinoma, lobular carcinoma, colloid carcinoma, and mucinous carcinoma.[5]The present study evaluated the histomorphological spectrum of breast lesions in young females.

MATERIALS & METHODS

The present study consisted of 280 females <30 years old with breast lesions. Patients' consent was obtained before starting the study.

Data such as name, age, etc. was recorded. The site of breast lesions were recorded. The breast trucut biopsies, needle core biopsies, excisional biopsies and mastectomy specimens were received. Histopathological examination was performed by standard procedures using 10% formalin, paraffin embedding and staining by H&E methods. The results were statically analysed. P value less than 0.05 was set significant.

RESULTS

Table I Assessment of benign lesions

Benignlesions	Number	P value
Breast abscess	92	0.04

Accessory breast	2	
Fibroadenoma breast	32	
Fibroadenomatosis	18	
Benign breast lesion	56	
Lipoma	30	
Granulomatous lesion	8	
Benign fibrous histiocytoma	6	
Tubular adenoma	6	

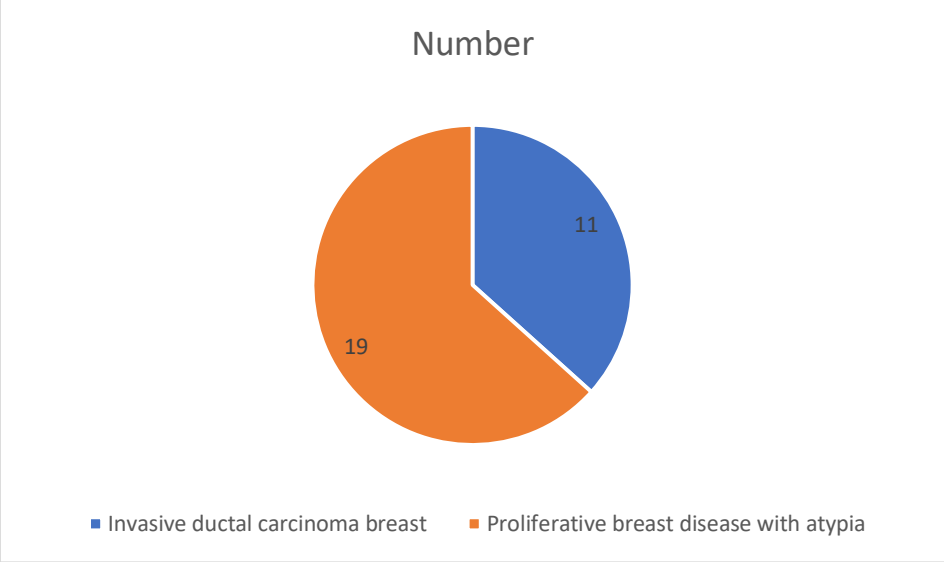
Table I shows that benign breast lesions found to be breast abscess in 92, accessory breast in 2,fibroadenoma breast in 32, fibroadenomatosis in 18, benign breast lesion in 56, lipoma in 30, granulomatous lesion in 8, benign fibrous histiocytoma in 6 and tubular adenoma in 6 cases. The difference was significant (P< 0.05).

Table II Assessment of malignant lesions

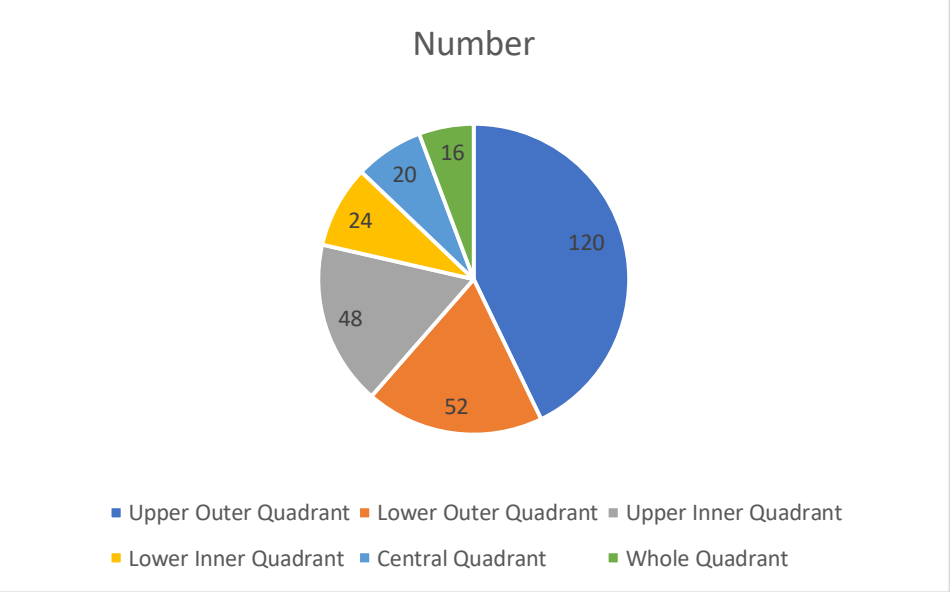
Malignant lesions	Number	P value
Invasive ductal carcinoma breast	11	0.05
Proliferative breast disease with atypia	19	

Table II, graph I shows that malignant lesions were invasive ductal carcinoma breast in 11 and proliferative breast disease with atypia in 19 cases. The difference was significant (P< 0.05).

Graph I Assessment of malignant lesions



Graph II Site of breast lesion



Graph II shows that site of breast lesion was upper outer Quadrant in 120, lower Outer Quadrant in 52, Upper Inner Quadrant in 48, Lower Inner Quadrant in 24, Central Quadrant in 20 and Whole Quadrant in 16 cases. The difference was significant (P< 0.05).

DISCUSSION

Breast diseases constitute heterogeneous group of lesions, and show variety of disease patterns ranging from inflammatory lesion, benign breast disease to invasive cancers.[6] Approximately 200,000 cases of breast lesions are diagnosed annually. Of these, carcinoma breast is 19% to 34% of all cancers in the female population.[7] In India, it forms the second common malignancy after carcinoma cervix and is detected in 20 per 100,000 women. Benign breast diseases are more prevalent as compared to malignant and inflammatory.[8] Due to lack of awareness and education, patients present with advanced disease. The pattern and etiology of breast disease differs in different countries.[9]The present study evaluated the histomorphological spectrum of breast lesions in young females.

We found that benign breast lesions found to be breast abscess in 92, accessory breast in 2, fibroadenoma breast in 32, fibroadenomatosis in 18, benign breast lesion in 56, lipoma in 30, granulomatous lesion in 8, benign fibrous histiocytoma in 6 and tubular adenoma in 6 cases. Aslam et al[10] found that there were 254 breast lesions. The overall mean age of patients with breast lesion was 25.18with a wide age range of 12–74 years. The most common cases identified are benign 191(75.3%), followed by inflammatory 30(11.8%) and malignant lesions 30(11.8%). Most patients presenting with complaint of pain have diagnosis of fibroadenoma 24 (63.2%) while patient with complain of lump also have the most common diagnosis of fibroadenoma 147 (72.8%).

We observed that malignant lesions were invasive ductal carcinoma breast in 11 and proliferative breast disease with atypia in 19 cases. In all, 95 women with breast tumors were examined in the study by Raju et al.[11] Of the ladies, 26 were under 30 while the remaining women were over 30. The majority found the lump on their own, and after four weeks, over 80% of them went to see the caregiver. 70.5% of the masses were benign, while 29.5% were malignant. Women under 30 were most likely to have fibroadenoma. With one exception, most of the cancer cases were in adults older than thirty. Overweight was the main risk factor that was substantially linked to cancer.

We found that the site of breast lesion was upper outer Quadrant in 120, lower Outer Quadrant in 52, Upper Inner Quadrant in 48, Lower Inner Quadrant in 24, Central Quadrant in 20 and Whole Quadrant in 16 cases.Khurshid et al[12] determined the frequency of malignant breast lesions in symptomatic young females presenting with breast lumps. It included both male and female patients up to the age of 25 years. A total of 714 surgical specimens of symptomatic breast lesions were received at the pathology department. There were 575 (80%) benign, 119 (16%) inflammatory and 20 (2.8%) malignant lumps.

Nikumbh et al[13] in their study 473 resected breast lesions were reviewed. Out of total 473 resected specimens of breast, benign lesions accounted for 336 (71.05 %) and malignant 136 (28.75%). The unusual findings were 5.48% in malignant category and 1.12% in benign category and one in intermediate/ borderline category. In unusual malignant category, they found 8 types of rare tumors out of 12 unusual variants. In benign and intermediate lesions, we found 4 cases of unusual pathologies

CONCLUSION

The majority of cases had benign lesions rather than malignant ones. Benign breast lesions and breast abscesses were frequent lesions. The upper outside quadrant was the common site.

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