

Histopathological Spectrum of Carcinomabreast in Jaipur, Rajasthan – A Retrospective Study

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Abstract: *In world, carcinoma of breast is the most common malignant tumour in females. Cancer is one of the top 10 causes of death in India. Histopatologically two main types Invasive Ductal Carcinoma (IDC) — incidence > 80 % Invasive Lobular Carcinoma (ILC) - 10-15 %.Most common age group for breast carcinoma in India is 41-50 years .Although breast cancer in young women is rare but in India it is more common than west. The incidence of male breast carcinoma, once thought to be relatively stable, now seems to be substantially increasing. We conducted a retrospective study and analyse the data received from 2009 to 2013 in various histopathological labs at Jaipur, to see incidence of different types of breast cancer in different sex and age group. In our study approximately 1/3 breast biopsy diagnosed malignant. Most common malignant carcinoma was IDC-NOS(84.74%) followed by lobular carcinoma(5.31%), medullary carcinoma(1.6%).We found most common age group 41-50(34.8%), followed by 51-60(22.42%) and in young female (<30 years), it was around 6%.Incidence of male breast carcinoma was 2.67%. This study shows higher incidence of breast carcinoma in young females, this stresses the need for change in modalities of early cancer detection, modifying, and adjusting control efforts and multidisciplinary therapeutic efforts.*

Keywords: Breast carcinoma, Intra ductal carcinoma non-specific, Incidence, Age group, Young females

1. Introduction

In world, carcinoma of breast is the most common malignant tumour in females. In India cervical cancer is commonest carcinoma in females followed by carcinoma breast (16to 21%)[1], however in urban areas of developing countries, breast cancer is the most common cancer in women; due to increase in the life expectancy, urbanisation and western life style[2].

Cancer is one of the top 10 causes of death in India. Breast cancer is second most common cause of cancer-related deaths with 53, 592 (17.2% of all cancer deaths) deaths in 2008[3]. Presently 75, 000 new cases occur in India every year[4].

Diagnosis of breast cancer is done by triple assessment (clinical, radiological, cytoand histopathological), and managed by Multimodality approachi.e. surgery, chemotherapy, radiotherapy and hormonal therapy. This study was aimed to determine the incidence of different type of breast cancer in north east Rajasthan (Jaipur) by histopathological examination report from various pathological centres (sms hospital, sdm hospital, bhagwanmahaveer hospital and kcjoshi lab).

Different types of breast carcinoma

1. Non-invasive (a) Ductal carcinoma in situ (DCIS) (b) Lobular carcinoma in situ (LCIS)
2. Invasive (infiltrating)- (a) Invasive ductal carcinoma (“not otherwise specified”), the most common subtype of invasive carcinoma. Term used for all carcinomas that cannot be subclassified into one of the specialized types; (b) Invasive lobular carcinoma; (c) Medullary

carcinoma; (d) Colloid carcinoma (mucinous carcinoma); (e) Tubular carcinoma; (f) Other types.

Various types/subtypes can have different prognoses and treatment implications. Two main types Invasive Ductal Carcinoma (IDC) — incidence > 80 % Invasive Lobular Carcinoma (ILC) — 10-15 % Remaining cases of invasive carcinoma are comprised of other special types of breast cancer e.g. colloid medullary, micro papillary, papillary, tubular, etc.

2. Material and Methods

It is a record based retrospective study which analyse the data received from 2009 to 2013 in above mentioned various histopathological labs at Jaipur, to see incidence of different types of breast cancer in different sex and age group.

3. Result

In present study total no of cases were 8925.out of these 6120(68.57%) were benign and 2805(31.43%) were malignant.

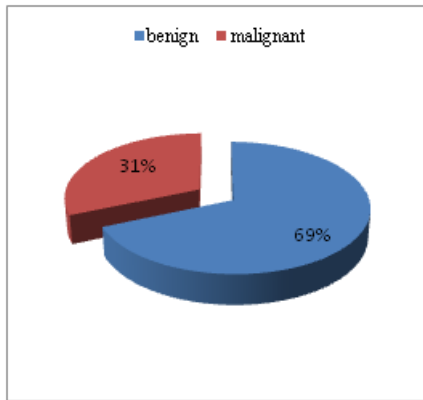


Figure 1: showing incidence of benign and malignant breast lesion

Table 1: Total study group (n=8925)

Type of cases	No.		Percentage	
Benign	6120		68.57	
	Female	Male	Female	Male
	5550	570	90.68	9.32
Malignant	2805		31.43	
	2730	75	97.33	2.67

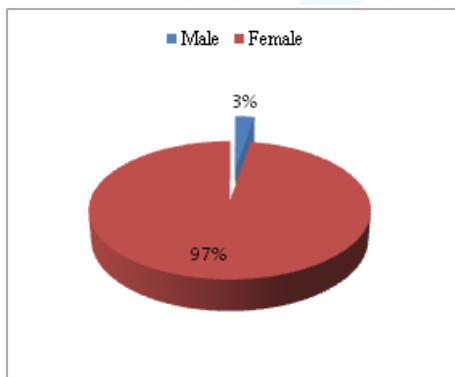


Figure 2: Showing incidence of breast carcinoma in male and female

Table 2: Various type of benign breast disease

Benign	No.	Percentage
Fibroadenoma	5579	91.16
Fibrocystic disease	376	6.14
Phylloid Tumour	76	1.24
Tuberculosis	73	1.19
Duct ectasia	7	0.11
Duct papilloma	9	0.15
	6120	100

Table 3: Age distribution of malignant cases

Age group	No of cases(Malignant)	percentage
<20	4	0.14
21-30	158	5.63
31-40	589	20.99
41-50	976	34.80
51-60	629	22.42
61-70	327	11.66
71-80	98	3.49
>80	24	0.86
	2805	100

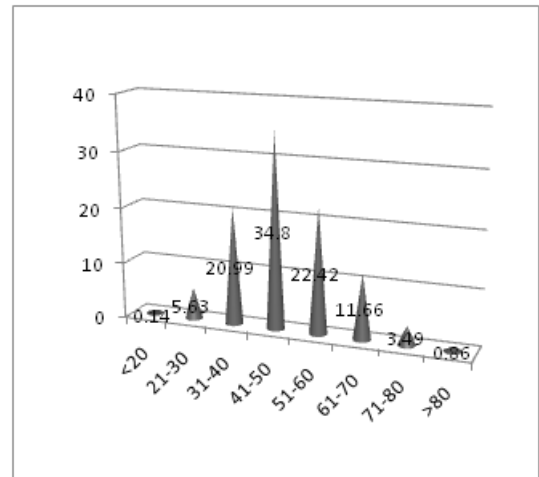


Figure 3: Showing incidence of malignant breast cases in different age group

Table 4: Incidence of various histological type of breast cancer

Type	Subtype	case	Percentage		
Lobular	In situ	4	0.14	5.31	
	Invasive	145	5.17		
Ductal	Infiltrating	In situ	42	1.5	
		Non specific	Specific	2377	84.74
			Medullary	45	1.6
			Tubular	17	0.61
			Mucinous	24	0.85
			Inflammatory	2	0.07
Others	Paget's	5	0.17	5.31	
	squamous	51	1.82		
	Mesenchymal	6	0.21		
	Lymphoma	5	0.17		
	Metastatic	82	2.92		

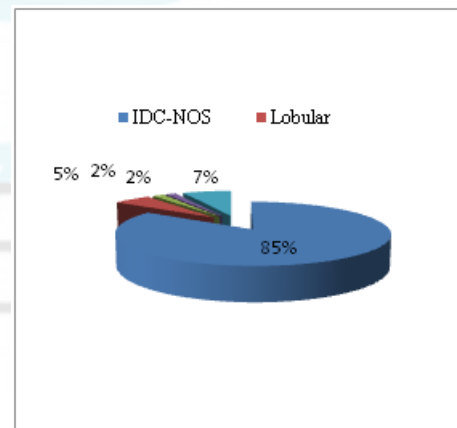


Figure 4: Showing incidence of different types of breast carcinoma

4. Discussion

Despite the fact, breast cancer is the most common cancer among females. The disease shows significant geographic and ethnic variation in age distribution.

Different studies have shown that the most common breast lesions are benign and needs only reassurance [5], [6]. In our study benign are also most common (68.57%).

Fibro adenoma is the commonest lesion in the category of benign breast disease. Ferguson also reported most common benign breast lesion as fibroadenoma occurring before the age of 25 years of age [7]. Our study shows

fibroadenoma is most common benign lesion accounting for 91.16%.

Table 5

Most prevalent age(years)	Our study	VissaShanthi et al[17]	Ms Siddiqui et al[18]	Acharya et al[19]
	41-50	50-59	40-49	41-45

The results of the study showed that in a total of 2805 breast cancer patients, the common age group was 41 – 50 years with 976 (34.80%) cases, followed by 51 – 60 years with 629(22.42%) cases and then 31 – 40 years age group with 589 (20.99%) of cases. According to these statistics it can be said that women of the middle age group, fourth-to-sixth decade (31 – 60 years), 78.21% of cases are at a higher risk of developing breast cancer in the local set-up as also reported in studies from India and other Asian countries [8-10]. However, reports from the western world show that the female breast carcinoma is predominantly seen in the fifth and sixth decade.

Although breast cancer developing in women younger than 35 years old is rare and only accounts for 2% of all cases in the West [20], the incidence is much higher in Indian women. Study from India reported that breast cancer in young women aged 35 years or younger was 8% [21]. In our study below 30 years are around 6% cases.

Breast cancer in males is relatively uncommon, accounting for less than 1% of all breast cancers and less than 1.5% of all malignancies in men [11]. In our study it is 75 cases(2.67%).The incidence of MBC, once thought to be relatively stable, now seems to be substantially increasing. The incidence of male breast carcinoma increased significantly from 0.86 to 1.08 per 100, 000population in the past 25 years[12].

Most common histological variant in our study was invasiveductal carcinoma2465 cases(87.87%)which is similar to Forae et al., Godwin A. Ebughe, and Saxena et al [13-15].

IDC NOS is commonest breast cancer followed by lobular carcinoma in the hospital-based cancer registries in Mumbai, Bangalore, and Thiruvananthapuram. Saxena et al[15]and Sandhu et al[16]. also observed same, in present study IDC NOS 2377 cases (84.37%) is commonest breast cancer and lobular carcinoma 149 cases (5.31%) was second most common variant.

5. Summary and Conclusion

1. A total of 8925 breast biopsies were received in five years. Amongst these 6120 were benign breast neoplasms (68.57% incidence of total biopsies) and 2805 were malignant breast neoplasms (31.43% incidence of total biopsies).
2. Fibroadenoma was the most common (91%) benign breast neoplasm. Next in frequency was fibrocystic disease (6.14%). The incidence of malignant breast neoplasms in males was 2.67%.

3. In cases of malignant breast neoplasms, the Invasive ductal carcinoma, not otherwise specified was the most common (84.37 %), followed by lobular carcinoma (5.31%).
4. In the malignant neoplasms, the highest incidence was observed in the age group of 41-50 years (34.8%).
5. Breast cancer is now occurring increasingly in younger age groups in India when compared with western countries and a more aggressive nature of the disease. This stresses the need for change in modalities of early cancer detection, modifying, and adjusting control efforts and multidisciplinary therapeutic efforts.

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Conflict of Interest

None

Abbreviations

DCIS- Ductal carcinoma in situ

LCIS- Lobular carcinoma in situ

IDC-NOS- Infiltrating duct carcinoma non otherwise specified

IDC- Invasive duct carcinoma

ILC- Invasive lobular carcinoma

MBC- Male Breast Cancer