

Original research article

Evaluation of the spectrum of benign breast diseases of women in a tertiary care hospital: an observational study**Dr. Shri Krishna Ranjan¹, Dr. Santosh Kumar²****¹Associate Professor, Department of Surgery, Anugrah Narayan Magadh Medical College and Hospital, Gaya, Bihar, India.****²Assistant Professor, Department of Surgery, Anugrah Narayan Magadh Medical College and Hospital, Gaya, Bihar, India****Corresponding Author: Dr. Santosh Kumar****santoshmch04@gmail.com****Abstract****Aim:** to evaluate the clinicopathological profile of benign breast diseases in women.**Methods:** A Prospective study was conducted in the Department of Surgery, Anugrah Narayan Magadh Medical College and Hospital, Gaya, Bihar, India, for 12 months. Patients presented with different breast related problems like lump in breast, nipple discharge, associated fever and mastalgia were admitted in surgical ward for evaluation.**Results:** In the present study, 120 cases were examined and analysed. Fibroadenoma formed the most common benign breast disease accounting for 50 cases (41.67%), followed by fibroadenosis in 25 cases (20.83%). Benign breast disease was commonly seen in the age group of 20-30years constituting 47.5% of all patients followed by 26.67% cases in age group of 30-40years. It is extremely uncommon in <10yrs and above 55years.

Among all the benign breast diseases, left sided breast involvement was more common constituting 62 (51.67%) cases while right breast involvement was less common constituting 45(37.5%) patients. Bilateral involvement was seen in only 13 (10.83%) patients. Considering the pattern of benign breast diseases, fibroadenoma was the most common lesion constituting 50 (41.67%) cases followed by fibroadenosis (fibrocystic disease) constituting 25 (20.83%) cases, fibroadenoma with fibrocystic changes constituting 17(14.17%) and breast abscess constituting 8(6.67%) cases. Other benign breast diseases include phylloides tumour 5 (4.17%), lipomas 3(2.5%) and 2(1.67%) galactocele. Patients with breast lump 83.33% , patients with breast pain 35% and patients with nipple discharge 3.33%.

Conclusion: The breast lesions pattern revealed by the present study provides valuable information regarding clinic-pathological profile of breast lesions.**Keywords:** Breast lesion, Inflammatory, Benign lesion and Malignancy.**Introduction**Breast lesions constitute a heterogeneous group of diseases which classified as inflammatory, benign includes epithelial and stromal proliferations and developmental anomalies and malignancy. Approximately 200,000 cases of breast lesions were diagnosed annually.¹Benign breast diseases are more prevalent as compared to malignant and inflammatory.¹Breast diseases are one of the commonest ailments among females worldwide. Patients with breast-problems make up a major part of the patient load at a general surgical out-patient clinics. Breast is a dynamic organ which undergoes cyclical changes throughout a women's reproductive life. Benign breast diseases are more common causes of breast problems and 4 times more frequent than malignant ones and the lifetime risk of clinical benign breast disorder was calculated to be more than 50%.² Breast cancer is the most common malignancy

in developed nations in women. The distribution of clinical symptomatology reveals symptoms of breast diseases such as breast lumps, breast pain or tenderness, nipple discharge or inversion and changes in skin of breast. These are common in women of all ages from adolescents to older women. Benign breast conditions are associated with morbidity and great concern for the patient and are 4-5 times more common than breast cancer. It is 10 times more common than cancer in west. Benign breast diseases are the most common cause of breast problems in females and it is more frequent than malignant ones up to 30 % of women will suffer from a benign breast disease requiring one or other sort of treatment at some part of their lives.³⁻⁷ There have been relatively little academic investigations into complex subject.⁸ during the past decade there has been increasing interest in benign breast disease. More patients demand investigations and treatment for symptoms of benign disease, which in turn has increased the number of women referred to specialist breast disease units.⁸ Many women have symptoms of breast disease but few have cancer. Yet these symptoms are understandably a source of great concern for women for women. The challenge for physician is to distinguish between benign and malignant lesions and to know when to treat and when to reassure. Making such discrimination is not easy as the condition are diverse and vary in presentation.⁹ There is a question of premalignant disorders and histologic features that may imply an increased risk of breast cancer. Increasing understanding of these conditions may prove important in understanding the pathogenesis of breast cancer and in defining high risk group in whom regular surveillance may be beneficial. Clinicians must therefore provide a high degree of diagnostic accuracy while at the same time ensuring that an excessive rate of biopsy is prevented.⁸ Aim of this study was to evaluate the clinicopathological profile of benign breast diseases in women.

Material and methods

This Prospective observational study was done in the Department of Surgery, Anugrah Narayan Magadh Medical College and Hospital, Gaya, Bihar, India, for 12 months, after taking the approval of the protocol review committee and institutional ethics committee.

Methodology

As per protocol, patients presented with different breast related problems like lump in breast, nipple discharge, associated fever and mastalgia were admitted in surgical ward for evaluation. Patients were clinically examined to record all clinical details. Sonography, mammography and fine needle aspiration cytology was done in selected cases as per need. Patients were posted for surgery as indicated. Final diagnosis was made after histopathological examination of the specimen. Patient of either sex, presented with breast lump, nipple discharge, sinus, associated fever and mastalgia in whom histopathology revealed any type of non-malignant BBD were included in the study. Patient treated on outdoor patient basis were excluded further patient with malignant breast lesions and acute breast abscess requiring incision and drainage were excluded from the study.

All patients satisfying above criteria were considered for the study. All clinical records were collected, and evaluated for various parameters like age, sex, type of breast disease. Clinical, imaging and histopathological diagnosis was noted. Information regarding surgical and medical treatment given to the patients was collected and reviewed. After making an appropriate clinical diagnosis, one or more of the special investigations – FNAC, mammography, ultrasound or a core- needle biopsy were carried out for the confirmation of the diagnosis. All patients underwent operative treatment either in the form of excision biopsy or enucleation or wide excision or simple mastectomy. The excised specimen was sent for histopathological examination for confirmation of clinical diagnosis. All the patients were followed up for varying periods for evidence of recurrence

Results

In the present study, 120 cases were examined and analysed. Fibroadenoma formed the most common benign breast disease accounting for 50 cases (41.67%), followed by fibroadenosis in 25 cases (20.83%). Benign breast disease was commonly seen in the age group of 20-30years constituting 47.5% of all patients followed by 26.67% cases in age group of 30-40years. It is extremely uncommon in <10yrs and above 55years.

Among all the benign breast diseases, left sided breast involvement was more common constituting 62 (51.67%) cases while right breast involvement was less common constituting 45(37.5%)patients. Bilateral involvement was seen in only 13 (10.83%)patients. Considering the pattern of benign breast diseases, fibroadenoma was the most common lesion constituting 50 (41.67%) cases followed by fibroadenosis (fibrocystic disease) constituting 25 (20.83%) cases, fibroadenoma with fibrocystic changes constituting 17(14.17%) and breast abscess constituting 8(6.67%) cases. Other benign breast diseases include phylloides tumour 5 (4.17%), lipomas 3(2.5%) and 2(1.67%)galactocele.

Table 1: Spectrum of benign breast diseases

Type	Number of Cases=120	Percentage (%)
Fibroadenoma	50	41.67
Cystosarcoma phylloides	5	4.17
Fibroadenosis	25	20.83
Breast abscess	8	6.67
Duct ectasia	3	2.5
Lipoma	3	2.5
Fibroadenoma with fibrocystic changes	17	14.17
Duct papilloma	4	3.33
Galactocele	2	1.67
Accessory breast	1	0.83
TB Mastitis	1	0.83
Sebaceous cyst	1	0.83

Table 2: Age (years) distribution of different benign breast diseases

Disease	Below 20yr	20-30	30-40	Above 40	Total
Fibroadenoma	8	26	10	6	50
Cystosarcoma phylloides		1	1	3	5
Fibroadenosis	3	13	8	1	25
Breast abscess		3	4	1	8
Duct ectasia		2	1		3
Lipoma		1	2		3
Fibroadenoma with fibrocystic changes	8	5	3	1	17
Duct papilloma		3	1		4
Galactocele		2			2
Accessory breast			1		1
TB Mastitis			1		1
Sebaceous cyst		1			1
	19	57	32	12	120

Table 3: Site of involvement

Disease	Rt Breast	Lt Breast	Both	
Fibroadenoma	16	27	7	50
Cystosarcomaphylloides	1	3	1	5
Fibroadenosis	7	13	5	25
Breast abscess	3	5		8
Duct ectasia	2	1		3
Lipoma	1	2		3
Fibroadenoma with fibrocystic changes	9	8		17
Duct papilloma	2	2		4
Galactocele	1	1		2
Accessory breast	1			1
TB Mastitis	1			1
Sebaceous cyst	1			1
	45(37.5%)	62 (51.67%)	13 (10.83%)	120

Table 4: Different types of presentation and their incidence

Presentation	No of patients	Percentage (%)
Breast lump only	74	61.67%
Breast lump + pain	24	20%
Breast lump + pain + nipple discharge	2	1.67%
Breast pain only	16	13.33%
Nipple discharge only	4	3.33%

Patients with breast lump 83.33% , patients with breast pain 35% and patients with nipple discharge 3.33%.

Discussion

Benign breast diseases includes a diverse group of conditions which range from normal, to aberrations in the physiology, to frank disease. The patients of BBDs generally present with combination of these complaints – breast lump, breast pain and nipple discharge. It is been proposed that all the patients having discrete breast lumps should be screened by triple assessment to make an early provisional diagnosis. By this approach, we attempted to diagnose most of the benign breast conditions within 72 hours of the first consultation. Previous studies conducted on the spectrum of benign breast conditions shows some variations between Western statistics and the Indian statistics.

In the present study we found fibroadenoma was the most common breast lesion in our study constituting 50 cases (41.67%), benign breast lesions. Similar findings were reported by Amr et al,¹⁰ Kulkarni et al,¹¹ Malik et al.¹² In their study they found most common benign breast lump was fibroadenoma. Amr et al¹⁰ reported 30.7%, Kulkarni et al¹¹ 62.32%, Malik et al¹² 41 %, cases of fibroadenoma. In present study the most common age group was 20-30years constituting 47.5% of fibroadenoma which is comparable to the above studies.

Second most common lesion in our study was fibroadenosis accounting for 20.83% of benign breast lesions. Echejoh et al.¹³ observed maximum number of cases in 30-40 years. Amr et al.¹⁰ reported maximum incidence of fibrocystic disease in 31-35 years. In the present study the maximum age incidence observed in the age group of 20-30 years.

Naveen et al., (2013) and Rashid et al., (2005) noted fibrocystic disease as the second common BBD after fibroadenoma accounting for 36% and 17% respectively. Stern (1992) found fibrocystic disease as the most common in females of all ages especially in the middle age group.^{14 15} In present study, 81% patients presented with lump in breast. Kulkarni et al.¹¹

observed lump as main presenting symptom in most of the benign proliferative breast lesion, which is in accordance with this study. Malik et al.¹² reported breast abscess (12.4%) as second most common benign breast lesion. In present series we found maximum age incidence in the age group ranged from 20-30 years and majority of them were lactating mothers comparable with findings of Malik et al.¹²

Most of cases of granulomatous mastitis were in between 30-40 years of age. Galea et al.¹⁶ observed granulomas confined to the lobule. Our present study findings are similar to these workers that the granulomas are confined to lobule.

In present study, incidence of tuberculosis was found to be 0.83 %. Ikard and Perkins¹⁷ and Haagensen,¹⁸ Shinde et al.¹⁹ observed 0.025% and 0.062%, 1-4.5% incidence of tuberculosis of breast, respectively. We observed maximum number of patients of breast tuberculosis in 30-40 years of age group, which is comparable with incidence reported by Tewari et al.²⁰ (20-50 years of age group) while Goldmann et al.²¹ observed maximum number in 20- 50years of age.

The patients were broadly divided into 3 groups, depending on their symptoms or presentations, such as a breast lump, breast pain and a nipple discharge. The commonest presentation was breast lump which comprised (83.33%) cases, patients with breast pain 35% and patients with nipple discharge 3.33%.

More than one symptom was present for the same patient Among 42 (35%) patients with breast pain, 16(13.33%) patients complained of breast pain (mastalgia) only, who were treated by using a conservative approach or reassurance. The rest had associated complaints like breast lump and nipple discharge. The pain was cyclical in 20 patients and was non-cyclical in 15 cases .Among the 6 cases with nipple discharge, 4 cases presented with nipple discharge only, without any associated lump or pain. The cause for 4 cases was intraductal papilloma and for the rest, it was mammary duct ectasia.

All the cases in this study were subjected to USG of Breasts. After verifying with histopathological diagnosis, we found that USG of the breast has a good sensitivity and specificity in the diagnosis of fibroadenoma. It was helpful in differentiating solid from Cystic lumps of the breast. FNAC forms the major investigatory modality with a sensitivity of 96% and specificity of 88 % in diagnosing fibroadenoma. Surgical excision is the effective treatment for most of the benign breast disease nearly up to 90% cases. Wide excision and simple mastectomy needed rarely. Women who came for follow up after surgical procedure were satisfied by treatment.

Conclusion

The breast lesions pattern revealed by the present study provides valuable information regarding clinicopathological profile of breast lesions.

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