International Journal of Enhanced Research in Medicines & Dental Care (IJERMDC),
ISSN: 2349-1590, Vol. 4 Issue 5, May-2017, Impact Factor: 1.102

Clinical Spectrum of Benign Breast Diseases: A Prospective Study Of100 Cases (With Special References to Quantify High Risk Group)

Dr. Chetan Sharma[1], Dr. Latika Sharma[2], *Dr. Aamir Hussain Usmani[3], Dr. Harsh Bagla[4], **Dr.Anupam Bhargava[5], Dr. Amit Soni[6]

[1] Ex Professor & Unit Head , Department of General Surgery , Dr. Sampurnanad Medical College , Jodhpur , RUHS, India
[2] Professor & Unit Head , Department of General Surgery , Dr. Sampurnanad Medical College , Jodhpur , RUHS, India
[3,4,5,6](Resident , Department of General Surgery , Dr. Sampurnanad Medical College , Jodhpur , RUHS, India

ABSTRACT

Aim And Objective: To study the profile of patients with non-malignant breast conditions presenting to surgical outdoor.

Methods: present prospective study was conducted in the Department of Surgery, Dr. S.N. Medical College, Jodhpur from January to November 2014.

Results: Fibroadenoma was the commonest (42%) in development group followed by fibrocystic disease/fibroadenosis(16%), gyanecomastia (2%) and gynaecomastia (2%) and galactocele (3%).

Conclusions: Non- malignant breast conditions comprise a large number of patients in surgical outdoors. Their incidence is highest between 20-49 years of age i.e during reproductive years of women's life. Patients of non-malignant breast conditions can present with a variety of symptoms of which lump and pain are the commonest.

Keyword: Beingn breast , FNAC , Biopsy , Nodularity , Maliganancy.

INTRODUCTION

The breast presents with a plethora of pathological conditions. Breast diseases are the most common diseases in females, worldwide in distribution and no race or country is free from it.

The spectrum of conditions range from simple breast abscess to as ominous as the breast cancer. Non-malignant breast conditions are a common problem but were given relatively lesser attention as compared to malignant breast diseases.

Benign condition of breast have always been neglected in comparison to cancer, despite the fact that only one out of ten-patients presenting to breast clinic suffer from cancer. This is not surprising in view of the emotional implications of breast cancer and its treatment but it mean that study of benign breast disease has been undeservedly neglected. Until the 1970s, reported studies were directed largely towards a possible relationship to cancer, rather than towards the basic process underlying benign conditions. This neglect is most evident in standard texts on breast diseases (the most recent comprehensive text on breast disease devote less than 5% of their material to benign conditions) because interest in benign process can be found when studying historical reference material. Great names surgery such as Hunter Astley Cooper, Billroth, Cheatle, Semb, Blood good and Atkins appear in literature.

From puberty till death, the breast is exposed to constant physical and physiological alterations related to menstruation, pregnancy and menopause. Non-malignant breast conditions have further been compounded because of confusing terminology, inadequate classification and poor correlation between clinical, radiological and pathological features Clinical conditions such as a painful modularity, have been equated with and confused with histological conditions such as fibrosis or hyperplasia.

The condition commonly called fibrocystic disease, or fibroadenosis of the breast has been a clinical problem for centuries as reflected in writing as early as Astely Cooper, at the beginning of nineteenth century. For patients, it cause discomfort and anxiety which varies from nuisance value to serious interference with their quality of life. For clinicians, the condition causes a range of problems in diagnosis, assessment and management which are not always clearly recognized.

With such a loose equivalence between clinical and histological details, it is not surprising that Foote and Stewarte wrote in 1945; 'chronic cystic mastitis is so ingrained in the minds of some pathologists that the diagnosis of al locally excised portion of the breast almost amounts to a surgico-pathological reflex.

But there is now an increasing interest in BENIGN BREAST DISEASES, as the patient has become more aware of their problem, the investigations required and the treatment available for their symptoms. This may led to a more precise understanding of the clinical pictures associated with individual elements, and the histological changes of cyclical modularity are increasingly recognized as lying within the range of histological appearance in the normal breast.

These days a better understating of the premalignant breast conditions can help in defining high risk groups, in whom regular surveillance may be beneficial for detecting breast cancer in early stage.

Spectrum of breast problems in India is different from that in the western world. Lactational breast mastitis, abscesses and granulomatous lesion are more frequent here. Also the Indian literature reports a different response rate to various therapies used for treatment of mastalgia as compared to the western world. Treatment choice also differ, as for instance, most patients with fibroadenoma want their lumps removed. There are a few studies in literature which reflect the diverse understanding of what constitutes non-malignant breast condition and are generally retrospective in nature.

The purpose of present work is to study the profile of BENIGN BREAST DISEASES in Indian patients.

AIMS AND OBJECTIVE:

AIM

To study the profile of patients with non-malignant breast conditions presenting to surgical outdoor.

OBJECTIVES

Following parameters were studied:

1. Clinical presentation of the patients.
2. Physical findings on local examination.
3. Radiological findings where needed.
4. Pathological findings, if available.

MATERIAL AND METHODS

The present prospective study was conducted in the Department of Surgery, Dr. S.N. Medical College, Jodhpur from January to November 2014. Population consisted of 100 randomly selected patients with various non-malignant breast conditions coming to surgery OPD.

Inclusion criteria Randomly selected patients who came to OPD with breast symptoms (non-malignant breast) and/or conditions at any age.

Exclusion criteria

1) Patients who did not give consent for the study.
2) Patients who were diagnosed to have breast cancer during the study.

Methodology

All the relevant parameters were recorded on a predesignate patients data Performa. All the patients with benign breast conditions were evaluated in terms of:

1) Clinical Presentation:

A detailed history was obtained regarding lump, lumpiness of nodularity in the breast. Its duration, onset and progression over the period were noted. Pain in breast ,its onset, duration, nature and relationship with menstrual cycle was noted. Discharge from nipple, its duration, color, amount, (scanty,moderate, large), unilateral or bilateral, from single or multiple areas on nipple and spontaneous or not was noted.

Any complaint of fever associated with lump was also noted. Past history of similar complaints or surgery of breast was also recorded. Menstrual history, obstetric history and history of drug intake were also recorded.

2**) Physical Examination:**

Complete breast examination was done along with the lump, its size (measured using non stretchable measuring tape in two direction), overlying skin, location, consistency, tenderness and mobility were recorded.

Nipple and areola were inspected for retraction, cracked nipple, and nipple discharge location. Axillary lymph nodes and supraclavicular lymph nodes were also examined.

3) **Radiological Investigation:**

a) Ultrasound- was advised inpatients with breat lump.
b) Mammography- was advised in patients above 35 years of age in selected cases breast conditions.

4) **Pathological Investigations :**

a) **FNAC-** was advised inpatients with well defined lump, some patients with areas of well demarcated nodularity, verge lump areas of those presented with lumpiness/ poorly defined lump. The FNAC findings in patients of mastalgia with nodularity or nodularity alone were reviewed by pathologist.
b) **Tru Cut biopsy-** in selected patients were FNAC diagnosis was suspicious or non conclusive.
c) **Cytological examination of nipple discarge-** was advised in selected patients with nipple discharge.
Statistical analysis
At the end of the study, the data was collected and analysed as per standard statistical guidelines.

OBSERVATION

A total of 100 patients (randomly selected) coming to surgery OPD in a single unit were included in the study from January 2014 to November 2014. The details of the patients were recorded on the performas and were analysed. The observation were as follows.

Age Distribution

The mean age of the patients was 29.75 years. Maximum number of patients 46% were in 15 to 25 years age group as shown below:

Tabel 1: Age distribution of patients

Age (in years)	No. Of patients (n=100)	Percentage
15-25	46	46
26-35	30	30
36-45	16	16
46-55	4	4
>55	3	3

Sex Distribution

In our study, there were 98 females and 2 males.

Tabel 2: Sex distribution of patients

Sex	No. Of patients (n=100)	Percentage
Female	98	98
Male	2	2

MARITAL STATUS

On analysis of marital status, out of 100 patients. 81 were married (81%) and 19 were unmarried (19%).

Tabel 3: Marital status

Marital Status	No. Of patients (n=100)	Percentage
Married	81	81
Unmarried	19	19

DURATION OF SYMPTOMS

The duration of illness ranged from 2 days to 6 years with a mean of 11.66 month. Acute illness e.g breast abscess, mastitis etc had a mean of 6.47 days and chronic illness e.g. nodularity, lump, discharging sinus, nipple discharge etc had mean of 5.42 momths.

PATIENT'S COMPLAINTS

Maximum number of patients complained of lump in the breast (86/100), 9 had nodularity/lumpiness (9%). pain was present in 43 (43%) patients and nipple discharge in 22(22%) of patients.

Tabel 4: Patients complaints

Patients's Complaints	No. Of patients (n=100)	Percentage
Lump	86	86
Nodularity/lumpiness	9	9
Pain	43	43
Nipple discharge	22	22

History of Previous Intervention

Out of 100 patients, 3 patients (3%) had undergone previous surgical intervention. One had undergone previous aspiration of breast abscess but it reoccurred at the same site. One patients underwent lumpectomy for fibroadenoma excision in this hospital and developed fibroadenosis in the same breast 2 years later. Patients had undergone I&D lactational breast abscess, but developed inflammatory mass formation in the same breast few years after I&D which had to be excised.

Intervention	No. Of patients (n=100)	Percentage
No Intervention	97	97
Lumpectomy	1	1
I &D	1	1
Aspiration	1	1

RADIOLOGICAL INVESTIGATION:-

Mammography was done in 13 patients who were older than 30 years to rule out the possibility of malignancy. Findings were normal study in I patients and small well defined rounded radio opacity with no distortion of parenchyma in 2 patients.

Tabel 4: Mammographic findings in patients

Mammography	No. of cases (n=13)	Percentage
Fibroadenoma	4	30.77
Fibroadenosis (BIRAD'S Category)	4	4
Miscellaneous	5	38.46

PATHOLOGICAL INVESTIGATIONS

FNAC report was available for 72 patients of mastalgia and nodularity group. The most common finding was proliferative breast disease without atypia followed by non-proliferative breast disease.

Tabel 9: Spectrum of FNAC in group

Clinical diagnosis	No. of patients (n=72)	Percentage
Fibroadenoma	30	41.67
Fibroadenosis	11	15.28
Antibioma	5	6.94
Mastitis	13	18.06
Gynecomastia	2	2.78
Fat Necrosis	3	4.17
Miscellaneous	8	11.11

DIAGNOSIS:-

Tabel 10: Diagnosis

Diagnosis	**Number of patients (n=100)**	**Percentage**
Fibroadenoma	42	42
Breast abscess	17	17
Fibrocystic disease/fibroadenosis	1c6	16
Antibioma	11	11
Bacterial Mastitis	3	3
Galactocele	3	3
Gyanaecomastia	2	2
Fat necrosis	2	2
Accessory Breast	1	1
Duct papilloma	1	1

FIBROADENOMA

A total of 42 patients were diagnosed to have **Fibroadenoma.** Fibroadenoma most commonly presented in 15-30 years of age group. Average duration of lump was 3.14 months. Fibroadenoma occurred with almost equal frequency in both breast and 3 patients had bilateral breast fibroadenoma. The most common quadrant involved by fibroadenoma was upper outer quadrant (23%) followed by lower outer quadrant (7%) . 7 patients had multiple (2 or more) fibroadenomas. There was 1 patients of giant fibroadenoma and was advised excision. One patient had fibroadenoma co existing with malignancy. This patient had bilateral breast masses, clinically, fibroadenoma, but after excision of all, one mass was harbouring malignancy. Details are discussed later in the discussion.

Tabel 11: Side of Fibroadenoma

Side	No. of patients (n=41)	Percentage
Left	21	51.22
Right	17	41.46
Bilateral	3	7.32

Tabel 12: Location of Fibroadenoma

Side	No. of patients (n=41)	Percentage
Upper Outer	23	56.10
Upper Inner	1	2.44
Lower Outer	7	17.07
Lower Inner	3	7.32
Multiple	7	17.02

The diagnosis was made on the basis of clinical grounds and Ultrasonography was also advised which showed round or oval shapes, weak internal echoes, well defined margins which were consistent with clinical diagnosis. The FNAC report showed benign breast lesion suggestive of fibroadenoma.

FIBROCYSTIC DISEASE/FIBROADENOSIS

Most of the patients who had fibroadenosis belonged to 25-35 years of age. Mean duration of the disease was 5.94 months. A total of 11 patients were diagnosed with fibrocystic disease/fibroadenosis which presented with mastalgia/nodularity group the most common condition was cyclical mastalgia with nodularity followed by non-cyclical mastalgia with nodularity.

Tabel 13: Patients of mastalgia/nodularity

Complaints	No. of patients (n=43)	Percentage
Non-Cyclical mastalgia	26	60.47
Cyclical mastalgia	17	39.53

Ultrasonography was done in most patients of fibroadenosis/fibrocystic disease. It was also done as a follow up investigation to measure resolution of localized modularity- Mammography was used similarly in some patients. The most common finding was increased echogenicity of fibroglandular tissue/cystic change/prominent ducts which was diagnosed as fibroadenosis/fibrocystic disease.

Gynaecomastia

A total of 2 patients who presented with non-tender unilateral or bilateral enlargement of breast were diagnosed with gyanaecomsatia in this study. Mean duration of symptomas was 5 months. Gyanaecomastia was unilateral in both the patients. All the patients were having no predisposing factors. The genitalia in all patients were developed according to sexual maturity.

Galactocele

A total of 2 patients were diagnosed with Galactocele in the study. Mean age of the patients suffering from galactocele was 27.33 years. One patients was lactating at the time of diagnosis. Left breast was commonly involved (2/3). Mean duration of symptoms was 1.74 months. The diagnosis was made on clinical grounds ans was confirmed by ultrasonography and it was consistent (Smooth margins and echo free center) with galactocele.

Antibioma

A total of 11 patients had Antibioma in the study. Average duration of symtoms was 9.04 months. Mean age of patients suffering from antibioma was 35.45 years. The diagnosis was made on the basis clinical examination and confirmed by FNAC and USG in patients where indicated.

Breast Abscess

A total of 17 patients were diagnosed with breast abscess. The breast abscess was commonest in 20-30 years of age group. All patients of breast abscess had features of local inflammation i.e fever with chills, raised local temperature, and redness over area. There were more number of lactational breast abscesses (76.47%n n=13) as compared toe non locational breast abscess (23.52%, n=4). The man size of the abscess was 5_+2cm which was measured using measuring tape taking into account the area of swelling only. The most commonly involved areas were the upper outer quadrant and the subareolar

area. The mean duration of lactation in patients with lactational breast abscess was 4 month. Average duration of symptom's in lactational breast abscess was 5 days in non lactational breast abscess was 9 days.
The mean age group affected in lactational breast abscess was 24.46% years and in non lacational breast abscess was 31.5 years. The average volume of pus drained in lactational breast abscess was appproximately 250cc and in non lactational breast abscess was approximately 50cc.

Tabel 14: Types of breast abscess

Breast abscess	No. of patients (n=17)	Percentage
Lactational	17	76.47
Non-lactational	4	23.53

Tabel 15: Characteristics of patients with lactational and non lactational breast abscess

Features	**Lactational breast abscess**	**Non lactationla breast abscess**
Common age group affected (in years)	24.61	26.59
Average duration of symptomas (in days)	5	9

The diagnosis of breast abscess was made on clinical grounds adn was confirmed bye the ultrasonography in indicated patients.

Bacterial Mastitis (without abscess**)**

A total of 2 patients were diagnosed with mastitis in this study. Average duration of their symptoms was 2.21 days. Non of them was lactating. They had signs of inflammation like raised local temperature and redness. One of the patients was febrile. The breast size was increased in both on the affected sied. The diagnosis was made on clinical grounds in lactational mastitis and was supported on ultrasonography (ill-defined area of altered echo texture with hyper echo genicity).

DUCTAL PAPILLOMA
Only 1 patient was present in this group who presented with bloody spontaneous nipple discharge from single duct and bilateral nipple which was confirmed on cytology to be blood.
TRAUMATIC FAT NECROSIS
2 patients presented with lump in their breast with restricted mobility. Mean duration of symptoms was 8 months. FNAC was done in these patients & the findings were of suggestive fat necrosis.

DISCUSSION

The present study was undertaken at Mahatma Gandhi Hospital, Dr S.N Medical College, Jodhpur, Department of General Surgery, From January to November 2014. 100 randomly selected patients of non-malignant breast conditions were studied. The mean age of the patients with non-malingnant breast condition in present study was 29.75 years, most of the patients were in the age group 15-25 years (46/100). A similar study was conducted at medical college, Sion Mumbai where rando 500 females of reproductive age were studied and 60 patients (12%) were found to have non-malingnant breast conditions, out of which 76% of the cases were in the 20-40 years of age group[104]. The reported incidence in a large study conducted in U.K (Huges LE et al) found the incidence of non-malingnant breast conditions in 20-49 years of age group to be 10.4 per 1000 woman years for symptomatic disease and 5.4 per 1000 wonan years for biopsied lesions[10] . Most patients were in the age group of 20-40 years.

In the present study, there were 81% of married patients and 19% were unmarried.In the present most of the married patients were between 20-30 years of age and the unmarried women were mostly below the age of 20 years , so the effect of nulliparity was difficult to assess. Maximum number of patients complaind of lump in the breast (86%). Out of these 9 had nodularity/lumpiness.Pain was present in 43 patients and nipple discharge in 22 patients. 1 patients had accessory breast. 38/100 patients had more than one complaint.

Antibioma can pose the clinical dilemma in the management of the breast lumps. It is often difficult to distinguish antibioma from malignancy. FNAC can be deceptive and the history in cases of malignancy can also be very confusing with the past history of some inflammatory conditions.In the present study, total 11 cases (11%) were diagnosed an

antibioma with preoperative history and added by imaging and FNAC. All the patients were treated by surgical excision. Of these 11 cases , 1 patients was clinically suspected to have malignant tumour and imaging and FNAC were inconclusive. With the high suspicion of malignancy , quadrant excision was done, but the histopathology proved it to be antibioma.
Fibroadenoma was the commonest (42%) followed by fibrocystic disease/fibroadenosis , (16%), gynaecomastia (2%), galactocele (3%), breast abscess (17%) & bacterial mastitis (3%), duct papilloma only (1%). 2 patients presented with Traumatic Fat Necrosis.

These studies also reported the upper outer quadrant as the commonest location of fibroadenoma. In the present study, fibroadenoma most commonly presented in 15-30 years age group. The commonest age group affected by fibroadenoma in western studies is 15-25 years[121-123] average duration of symptomas being 5 months. In the present study, the average duration of lump was 3.14 month. These differences between Indian and western population can be explained by earlier onset of puberty and early consultaion for lump in the breast. Multiple firbroadenoma occured in 10-15% of women. The average size of fibroadenoma is usually reported to be 2-3 cm (Dupont WD et al 1994)[62] The largest number (63%) of fibroadenoma were reported in upper outer quadrant[62].

COMPLEX FIBROADENOMA : one case in the present series can be attributed to complex fibroadenoma meaning thereby the increased risk of malignancy or co existging malignancy as was found in this case.

Most of the patients who had fibroadenosis belonged to 25-35 years of age. Mean duration of the disease was 5.94 months. A total of 11 patients were diagnosed with fibrocystic disease/fibroadenosis which presented with mastalgia/nodularity or both and nipple discharge. Among the mastalgia/nodularity group the most common condtion was cyclucal mastalgia with nodularity followed by non-cyclical mastalgia with nodularity.

FNAC report was available for 72 patients of mastalgia, lump and nodularity group. The most common finding was proliferative breast disease without atypia followed by non-proliferative breast disease.

The prevalence of gynaecomastia was 2%. The mean duration of symptomas in these patients was 5 months. Both the breast were equally affected in cases.

The incidence of galactocele in this study was 3%. The average duratiion of symptoms in these women was 1.74 months. One patients in the galactocele group was lactating. The galactocele were commonest in the upper outer qudrant in the present study.

Inflammatory group consisted of breast abscess 17% & bacterial mastitis 3%. The breast abscess was commonest in the 20-30 years of age. The incidence of lactational breast abscess (76.47%) was higher than that of non lactational breast abscess (23.53%) in this study. The most common areas involved by breast abscess in the present study were upper outer quadrant and subareolar area. The mean duration of symptoms in lactational abscess was 5.94 days.

Neoplastic group consisted of one case duc papilloma only (1%) and one patient had co existing carcinoma with multiple fibroadenomas. This young female of 27 years was admitted with bilateral breast masses freely mobile and leaving no suspicion of fibroadenoma diagnosis.

SUMMARY & CONCLUSION:

Non- malignant breast conditions comprise a large number of patients in surgical outdoors. Their incidence is highest between 20-49 years of age i.e during reproductive years of women's life. Patients of non-malignant breast conditions can present with a variety of symptoms of which lump and pain are the commonest.

Among 100 patients studied, the mean age of the patients was 29-75 years Maximum number of patients 46% were in 15 to 25 years age group. There were 98% females and 2% males.

Maximum number of patients complained of lump in the breast (86%). Out of them 9 had nodularity/lampiness. Pain was presented in 1% of the total patients.

Among the congential conditions accessory breast was present in 1% of the total patients.

Inflammatory group consisted of breast abscess (17/100) & bacterial mastitis (2/100). The breast abscess was commonest in 20-30 years of age group. The incidence of lactational breat (76.40%) abscess was higher than that of nonlactational breast

(23.52%) abscess in this study. The most commonly involved areas were upper outer quadrant and subareolar area. The mean duration of lactation in patients with lactational breast abscess was 4 month. Average duration of symtoms in lactational breast abscess was 5 days and in non lactational breast abscess was 9 days. Ultrasonograpy was consistent with the diagnosis.

Fibroadenoma was the commonest (42%) in development group followed by fibrocystic disease/fibroadenosis(16%), gyanecomsatia (2%) and galactocele (2%) and galactovele (3%). Fibroadenoma was most commonly present in 15-30 years of age group. Average duration of lump was 3.14 months. Fibroadenoma occured withth fibroadenoma was upper outer quadrant (56.10, 23/41) followed by upper inner quadrant (17.07% 7/41). Ultrasonography and FNAC were consistent with clinical diagnosis. Most of the patients who developed fibroadenosis belonged to 25-35 years of age. Mean duration of the disease was 5.94 months. A total of 11 patients were diagnosed with fibrocystic disease/fibroadenosis which presented with mastalgia/nodularity group the most common condition was cyclical mastalgia with nodularity followed by non-cyclical mastalgia with nodularity.

Fat necrosis and gynecomastia was found in two cases each and compares well the available literature.

Neoplastic group consisted of one case of duct papilloma only.(0.99%). Other case who had multiple fibroadenomas coexisting with malignancy needs special mention. This young female had bilateral masses in breast and we could not suspect malignancy on clinical grounds and after excising all (in total 8) one out of these was found to harbour malignancy, Such complex fibroadenomas are suspected by the age of the patient, size and one or more of four histological features viz, sclorising adenosis, epithelial calcification, cyst larger than 3 cm and papillary appocrine change This raised the question of pre-operative evalutation of all supposedly benign masses by FNAC/Biopsy/Imaging etc. For proper managment of such so called fibroadenomas.

Present study is too short of recommending any future guidelines for such cases and hope in future some new innovation or ideas may make such decisions simpler for allecating human sufferings.

REFERENCES

[1]. Benign Disorder and Diseases of The Breast Mansel R.E Webster D.J.T, Sweetland H.M Saunders Publication 2009 III: 0:7
[2]. Guray M, Sahin AA. Benign breast disease: classfication diagnosis and managment. The Oncologist 2006; 111: 435-439.
[3]. Benign conditions of breast. Oxford textbook of surgery 2002; 1169-1188.
[4]. LE Hughes. Classification of benign breast disorder; the ANDI classficaton based on physiological processes within the normal breast. British Medical Bull 19991; 47: 251-7.
[5]. Teimourian B, Hakki AR. Benign disease of female breast Hosp Med 1987; 23:85
[6]. Haagensen CB, Bodian C, Haagensen DE, Breast carinoma risk and detection, Saunders 1981: 55-80.
[7]. Shukla HS, Kumar S. Benign breast disorders in northwestern populations; part 2 Benign Breast disorder in India; word J Surg 1989; 13:746-9.
[8]. Bland: The Breast: Comprehensive Managment of Benign and Malignant Disorders, 3rd ed. Copyright© 2004 Saunders, An Imprint of Elesrier.
[9]. Mckee G, Cytologic grading of fine needle aspirates from breast carcinoma. Female patients 1996; 21:19.
[10]. Organ jr ch , fibroadenoma of femalebreast critical assesment j natl med assoc. 1983:75:701.
[11]. Farrow Jh , Ashikari breast leisions in young girls 1969:49:261 .