A study on clinical profile of Benign Breast lesions

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Abstract

Background and Objectives: Benign breast disease are commonly found as painless palpable mass the diagnosis may be corroborated with specific benign features found on physical examination, mammography and ultrasound. The purpose of present study was to assess the various age of presentation of benign breast diseases and their mode of presentation.

Method: Fifty cases of benign breast diseases were studied during the period from June 2017 to May 2018. All cases of benign breast disease presented with lump (100%) out of them 80% presented with painless lump and 20% presented with painful lump. In present study 96% were premenopausal and 4% were postmenopausal woman. Most common site of involvement was left breast and most common quadrant was upper outer quadrant.

Conclusion: Benign breast disease present mainly 11-30 year of age group. Most common clinical presentation in benign breast disease is lump (painless). Majority of benign breast disease involve upper and outer quadrant of breast. Lymph node involvement in benign breast disease is rare.

Keywords: Benign breast disease, ANDI, Fibroadenoma, Cystosarcoma phylloides

Introduction

Mammary glands, or breasts, are a distinguishing feature of mammals. It is unique in that its development and growth are under the control of numerous hormones and various physiological states such as pregnancy and lactation. Until recently benign disorders of the breast were regarded, as relatively unimportant: far more attention was focused on breast cancer. This has resulted in many patients with benign breast disease receiving rather scant attention from clinicians, and there has been relatively little academic investigation into this complex subject. Benign breast disease has also suffered from the major disadvantage of a hopelessly confusing terminology, inadequate classification and poor correlation between clinical, radiological and pathological features [2].

During the past decade there has been increasing interest in benign breast disease for a number of reasons. As patients demand investigation and treatment for symptoms of benign breast disease. This has, in turn, increased the number of women referred to specialist breast disease units these have participated in scientific studies on the classification and treatment of their condition [2].

The term benign breast disorder (BBD) can be defined as any nonmalignant breast condition and encompasses a wide range of clinical and pathologic disorders. Although BBD is not life threatening, clinicians require an in-depth understanding of its significance so that clear explanations can be given to affected patients, appropriate treatment can be instituted, and unnecessary long-term follow-up can be avoided [1]

Objectives

Objectives of the study

The clinico-pathological study of benign breast disease is undertaken;

- To study the age distribution of various benign breast diseases
- To study different types of benign breast diseases, their mode of Clinical presentation and Pathology.
Methodology
This clinicopathological study includes cases of benign breast disease as a prospective study conducted in Government hospital. This survey was mainly meant for studying the age distribution, to evaluate the different types of benign diseases of the breast and their mode of clinical presentation and pathology.

Inclusion Criteria: Patient who get admitted, who are clinical diagnosed and confirmed by histopathology examination representing various types of benign disease of the breast are included in the study.

Exclusion Criteria: Patients diagnosed clinically as benign breast disease but in whom histopathological examination reports proved to be otherwise are excluded from the study. Totally 47 cases came for follow up to the outpatient, but 3 cases did not come inspite of appeal made to them, mainly because of financial difficulties, partly because of their carelessness and probably because of the long distance from which the patients came to the hospital for their original treatment.

This is a study comprising of 50 cases of benign breast disease which includes 36 cases of fibroadenoma, 6 cases of Cystosarcoma phyllodes, 2 cases of lipoma, 2 cases of galactoceles, 2 cases of tubular adenoma and 2 cases of ductal ectasia.

After admission to the hospital, a detailed history was taken regarding the presenting complaints particularly the duration, mode of onset of lump and pain in breast, its progress, nipple discharge, history of undergoing operation previously for a similar lump, Family history of occurrence of benign breast disease, menstrual and obstetric history, history of taking contraceptive pills and whether the patient was pregnant or lactating. All details were entered in the charts specially prepared (proforma) after taking the history, a general examination of the patient was done and general condition noted as regards to anaemia and hypoproteinaemia. A detailed local examination of presenting lesion was then carried out and a diagnosis arrived at.

Results

Table 1: Type of benign breast disease in the present study

| Type                  | No. of Cases | Percentage |
|-----------------------|--------------|------------|
| Fibroadenoma          | 36           | 72%        |
| Cystosarcoma phyllodes| 6            | 12%        |
| Galactocele           | 2            | 4%         |
| Lipoma                | 2            | 4%         |
| Tubular adenoma       | 2            | 4%         |
| Ductal ectasia        | 2            | 4%         |

In my study Fibroadenoma forms the most common benign breast disease which is accounting for 36 cases (72%), followed by Cystosarcoma phyllodes 6 cases (12%), and 2 cases each of Lipoma (4%), Tubular adenoma (4%), Galactocele (4%), and Ductal Ectasia (4%) were found.

In my study, most commonly affected age group of B.B.D. is 21-30 Yrs, 22 cases (44%), followed by 11-20 Yrs 20 cases (40%) Fibroadenoma is most common in age group 11-20 Yrs 17 cases (47.22%) followed by age group 21- 30 Yrs 15 cases (41.67%) Cystosarcoma Phyllodes is most common in the age group 31-40 Yrs 3 cases (50%).

2 cases (100%) of Galactocele observed in age group 21-30 Years. 1 case (50%) each of Lipoma, Tubular Adenoma and Ductal Ectasia were seen in age group 11-20 Years.

Table 2: Age distribution of different benign breast disease in the study

| Diseases                  | <10Y | 10-20Y | 21-30Y | 31-40Y | 41-50Y | >50Y |
|---------------------------|------|--------|--------|--------|--------|------|
| Fibroadenoma              |      | 17 (47.22%) | 15 (41.67%) | 3 (8.33%) | 1 (2.38%) |      |
| Cystosarcoma Phyllodes    |      |        | 2 (33.33%) | 3 (50%) | 1 (16.67%) |      |
| Galactocele               |      |        | 2 (100%)  |        |        |      |
| Lipoma                    |      | 1 (50%)  | 1 (50%)  |        |        |      |
| Tubular Adenoma           |      | 1 (50%)  | 1 (50%)  |        |        |      |
| Ductal Ectasia            |      |        |        |        |        |      |
| Total cases               |      | 17 (42%) | 15 (38%) | 3 (7%) | 1 (2%) |      |

Graph 1: Age distribution of different benign breast disease in the study

Table 3: duration of symptoms in the study

| Duration | 1-3M | 4-6M | 7M-1Y | 1-2Y | 2-4Y |
|----------|------|------|-------|------|------|
| Fibroadenoma | 6  | 12  | 10 | 7  | 1   |
| Cystosarcoma Phyllodes | 3  | 2   | 1   | -   | -   |
| Galactocele | 1  | 1   | -   | -   | -   |
| Lipoma | -  | 1   | 1   | -   | -   |
| Tubular Adenoma | -  | -   | 1   | 1   | -   |
| Ductal Ectasia | -  | -   | -   | 1   | -   |
| Total | 6  | 16  | 16  | 10  | 2   |

In my study out of 36 cases of Fibroadenoma 12 cases presented with history of symptom for 4-6 months, 10 cases with history of symptom for 7months-lyear, 7 cases with history of symptom for 1-2year, 6 cases with history of symptom for 1-3 months, 1 cases with history of symptom for 2-4 years. Out of the 6 cases of Cystosarcoma phyllodes 3 cases presented with history of symptom for 4-6 months, 2 cases with history of symptom for 7months-lyear and 1 case with history of symptom for 1-2year. Out of 2 cases of Galactocele, 1 case each presented with history of symptom for 4-6 months and 7months-lyear. Out of 2 cases of Lipoma 1 case each presented with history of symptom for 7months-lyear and 1-2 years. Out of 2 cases of Tubular adenoma 1 cases each presented with history of symptom for 7months-lyear and 2-4 years.
In my study all benign diseases presented with Lump. Among these 40 cases (80%) presented with painless lump and 10 cases (20%) presented with painful lump. In my study, 30 cases (83.33%) of Fibroadenoma, 4 cases (66.67%) of Cystosarcoma Phyllodes, 2 cases (100%) each of Galactocele, Lipoma and Tubular Adenoma presented as painless lump. Where as, 6 cases (16.67%) of Fibroadenoma 2 cases (33.33%) of Cystosarcoma Phyllodes, and 2 case (100%) of Ductal Ectasia presented as painful lumps.

### Table 4: Mode of presentation

| Distance            | Total | Painless Lump | %     | Painful Lump | %     |
|---------------------|-------|---------------|-------|--------------|-------|
| Fibroadenoma        | 36    | 30            | 83.33%| 6            | 16.67%|
| Cystosarcoma Phyllodes | 6     | 4             | 66.67%| 2            | 33.33%|
| Galactocele         | 2     | 2             | 100%  | -            | -     |
| Lipoma              | 2     | 2             | 100%  | -            | -     |
| Tubular Adenoma     | 2     | 2             | 100%  | -            | -     |
| Ductal Ectasia      | 2     | -             | -     | 2            | 100%  |
| Total               | 50    | 40            | 80%   | 10           | 20%   |
Table 5: Pre-menopausal and post-menopausal status of patient in present study

| Diseases               | Premenopausal | Postmenopausal |
|------------------------|---------------|----------------|
| Fibroadenoma           | 35            | 1              |
| Cystosarcoma Phyilodes | 5             | 5              |
| Galactocele            | 2             | -              |
| Lipoma                 | 2             | -              |
| Tubular Adenoma        | 2             | -              |
| Ductal Ectasia         | 2             | -              |
| Total                  | 48(96%)       | 2(4%)          |

In my study out of 50 cases of B.B.D. majority 48 cases (96%) are premenopausal women and 2 cases (4%) are postmenopausal women.

In my study of 50 cases of benign breast disease, 26 cases (52%) presented in Left breast and 22 cases (44%) presented in Right breast and 2 cases (4%) presented as bilateral disease.

In my study Fibroadenoma occurred more often in Left Breast (50%) than Right Breast (44.44%) bilateral involvement was seen in 2 cases (5.56%) Cystosarcoma phyilodes occurred more often in left breast (66.67%) than Right Breast (33.33%)

Galactocele, Lipoma, Tubular adenoma, Ductal Ectasia occurred in equal distribution each accuracy for 50%. In my study occurrence of multiple Fibroadenoma was seen in 5 cases among 36 cases of Fibroadenoma. Multiple Cystosarcoma phyilodes were seen in 2 cases among 6 cases of Cystosarcoma phyilodes. The maximum number of lumps was 3 seen in 1 case, and 2 lumps were seen in 6 cases. Bilateral lumps were seen in 2 cases.

Table 6: Site of involvement

| Diseases               | Rt Breast | %   | Lt Breast | %   | Both Breast | %   |
|------------------------|-----------|-----|-----------|-----|-------------|-----|
| Fibroadenoma           | 16        | 44.44% | 18        | 50% | 2           | 5.56% |
| Cystosarcoma Phyilodes | 2         | 66.67% | 1         | 33.33% | -     | -     |
| Galactocele            | 1         | 50%   | 1         | 50%   | -           | -     |
| Lipoma                 | 1         | 50%   | 1         | 50%   | -           | -     |
| Tubular Adenoma        | 1         | 50%   | 1         | 50%   | -           | -     |
| Ductal Ectasia         | 1         | 50%   | 1         | 50%   | -           | -     |
| Total                  | 22        | 50%  | 22        | 50%  | 2           | 5%    |

Graph 4: Pre-menopausal and post- menopausal status of patient in present study

Graph 5: Site of Involvement
In my study, fibroadenoma Occurred, mostly in Upper Outer quadrant (12 cases) involvement of more than 1 quadrant was seen in 7 cases of Fibroadenoma out of 36 cases but in Cystosarcoma phyllodes 2 cases were involving more than one quadrant out of 6 cases. Galactocele occurred in Upper Outer (1 cases) and More than one quadrant (1 cases) out of 2 cases. All cases of Lipoma and Tubular adenoma occurred in Upper Outer quadrant. 2 cases (100%) of Ductal Ectasia occurred in central quadrant.  

| Disease               | Total | UO | UI | LO | LI | Central | >1q | Bilateral |
|-----------------------|-------|----|----|----|----|---------|-----|-----------|
| Fibroadenoma          | 36    | 12 | 6  | 4  | 1  | 7       | 2   | 2         |
| Cystosarcoma Phyllodes| 6     | 2  | 1  | 1  | 0  | 2       | 2   | 2         |
| Galactocele           | 2     | 1  | -  | -  | -  | -       | 1   | -         |
| Lipoma                | 2     | 2  | -  | -  | -  | -       | -   | -         |
| Tubular Adenoma       | 2     | 2  | -  | -  | -  | -       | -   | -         |
| Ductal Ectasia        | 2     | -  | -  | -  | -  | -       | 2   | -         |
| Total                 | 50    | 19 | 5  | 7  | 4  | 3       | 10  | 2         |

Graph 6: Quadrant topography of diseases in present study

Discussion

Benign Breast Diseases a common disease affecting women in our country

Type of Lesion: In my study, the most common benign breast disease was fibroadenoma occurring in 72% of cases. In the study Conducted by Rangabashyam et al. [71] in 1983, fibroadenoma was the main type of disease in 57%. In the series of Khanna et al. [72], in 1988, fibroadenoma was the main type of disease in 40.8%. Farrow JH et al. [73] reported fibroadenoma as the commonest B.D. of female breast Oluwole and freeman [74] in 1979, reported them as the most black women and adolescent white females. The next common benign diseases in my study was Cystosarcoma phyllodes occurring in 12% of cases. The other types of benign diseases found in my study was a two cases each of lipoma (4%), galactocele (4%), tubular adenoma (4%) and Ductal ectasia (4%).

Age Distribution: In my study of 50 cases, 44% cases were in the age group of 21-30 years. The next common age group is 11-20 years accounting for 40%. This corresponds to the study of Sushila Khanna [72] in which 40.06% Cases were in the age group of 21 -30 years. In my study, fibroadenoma was the commonest benign disease with highest incidence in age group 11-20 years (47.22%). The youngest patient was 16 years old and the oldest patient was 45 years old. Duray and Colleagues [75] described fibroadenoma most likely to occur in adolescents. Pike and oberman[76] reported the tendency of fibroadenoma to occur at the time of menarche. Mies and Rosen [77] have described a series of patients with an average age of 26 years with fibroadenomas. Foster ME. et al. [78] in their series of 362 cases of fibroadenoma reported the largest number of patients in the age group of 21 -25 years. Around 88.9% of fibroadenoma were observed in 11-30 years age group in the present study. In an Indian study by Dr. Rangabashyam et al. [71] maximum number of fibroadenoma (75.39%) were noted in 11-30 years age group. In the same way in Sushila Khanna [72] study 82.78% of fibroadenoma were presented b/w 11-30 years age group

| Age group | Present study | Rangabashyam et al. study | Sushila Khanna et al. study |
|-----------|---------------|---------------------------|----------------------------|
| 11-30 Years | 88.9%         | 75.39%                    | 82.78%                     |

In my study, the most prominent presenting symptoms was the presence of painless lump in 40 cases (80%) and 10 cases presented with painful lump (20%). In 36 cases of fibroadenoma, 30 cases (83.33%) presented with a painless lump which was accidentally noticed by the patient. 6 cases (16.67%) presented with a lump which was painful and pain started after the lump. The pain was reported as dull aching, non-radiating, Continuous and not in relation to menstruation. No cases of fibroadenoma presented with nipple discharge. Most of the fibroadenomas occurred with a duration of 4-6 months (33.33%). No patient with fibroadenoma had a history of previous operation for benign breast diseases. There was no positive family history although it is known that there may be a familial predisposition for bilateral fibroadenomas. In 6 cases of Cystosarcoma phyllodes, 4 cases (66.67%) presented with a painless lump and 2 cases (33.33%) presented with a lump associated with pain which started later. 3 cases (50%) occurred with a duration of 4-6 months. 1 case had a history of previous operation for a similar lump. No cases presented with nipple discharge. Majority of the cases in my study were in reproductive age group, 4 cases complained of irregularity of Menstrual cycle and none of them had any significant change in the size of the swelling before, during and after menstruation.

Clinical Features: In my study, the most prominent presenting symptoms was the presence of painless lump in 40 cases (80%) and 10 cases presented with painful lump (20%). In 36 cases of fibroadenoma, 30 cases (83.33%) presented with a painless lump which was accidentally noticed by the patient. 6 cases (16.67%) presented with a lump which was painful and pain started after the lump. The pain was reported as dull aching, non-radiating, Continuous and not in relation to menstruation. No cases of fibroadenoma presented with nipple discharge. Most of the fibroadenomas occurred with a duration of 4-6 months (33.33%). No patient with fibroadenoma had a history of previous operation for benign breast diseases. There was no positive family history although it is known that there may be a familial predisposition for bilateral fibroadenomas. In 6 cases of Cystosarcoma phyllodes, 4 cases (66.67%) presented with a painless lump and 2 cases (33.33%) presented with a lump associated with pain which started later. 3 cases (50%) occurred with a duration of 4-6 months. 1 case had a history of previous operation for a similar lump. No cases presented with nipple discharge. Majority of the cases in my study were in reproductive age group, 4 cases complained of irregularity of Menstrual cycle and none of them had any significant change in the size of the swelling before, during and after menstruation.
lump involving more than 1 quadrant. Foster ME. et al. [5], reported in their series of 362 cases of fibroadenoma, upper outer quadrant was more frequently involved and 55% occurred in left breast and 45% in the Right which correspond to present study. Of the 6 cases of Cystosarcoma phyllodes, 4 cases (66.67%) presented with involvement of left breast and 2 cases (33.33%) presented with involvement of right breast. 2 cases presented with involvement of more than one quadrant. 2 cases presented with a lump in upper outer quadrant.

**Multiplicity of fibroadenoma:** In my study, of the 36 cases of fibroadenoma 5 cases (13.89%) presented with multiple lumps and 2 cases (5.56%) had Bilateral involvement, In Haagensen's [10] series of 619 cases of fibroadenomas, multiple fibroadenomas occurred in 19.9%. Forster ME. et al. [5] reported multiplicity of fibroadenomas in 7.5% cases in their series of 362 cases of fibroadenomas. Of all fibroadenomas 10% of patient have multiple fibroadenoma on presentation.

**Conclusion**

In the present study Fibroadenoma is the most common benign breast disease. Most common clinical presentation in benign breast disease is lump (painless). Majority of benign breast disease involve upper and outer quadrant of breast. Lymph node involvement in benign breast disease is rare.

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