

Benign Breast Lumps in A Tertiary Health Care Facility in Southern Nigeria.

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Abstract:

Background: *The presence of a lump in the breast is a cause of anxiety and fear to most patients. This may be due to the increased awareness of breast cancer which is the commonest malignancy affecting females worldwide. .*

Objective: *To determine the clinic demographic and histologic pattern of benign breast diseases as seen in University of Port Harcourt Teaching Hospital (UPTH).*

1. **Materials and Methods:** *This is a 9 year (2006-2014) prospective study of all patients presenting with benign breast lumps in UPTH. Data were collected and analyzed using Statistical Package for Social Sciences (SPSS) version 17.*
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Results: *There were 308 patients with benign breast lumps within the study period and they were all females. The mean age was 24.8± 7.8 years with an age range of 12-43 years and a peak age incidence occurring in the third decade. The commonest lump was fibroadenoma accounting for 72.4% of cases followed by fibrocystic disease (20.8%) with mean ages of 23.7± 7.7 years and 26.9± 7.5 years respectively. Both lesions had a peak occurrence in the third decade.*

Conclusion: *Benign breast lumps occurred predominantly in the third decade with fibroadenoma being the commonest lesion encountered.*

Keywords: *Benign, Breast, lumps, Nigeria, Tertiary*

I. Introduction

Breast lump is the commonest presentation of breast diseases in both males and females [1, 2]. The presence of breast lump is a cause of anxiety, apprehension and uncertainty to most patients. This may be due to the increasing public awareness of breast cancer [3] which is presently, the most common female malignancy worldwide [4]. Nevertheless the vast majority of breast lesions are benign.

Benign breast diseases (BBD) are a wide range of lesions, including inflammatory, neoplastic and aberrant hormonal response disorders [5]. While most reports indicate that breast lumps are predominantly benign and mostly nonproliferative epithelial lesions, there has, however, been an increasing recognition of the risk of developing cancer from the various forms of premalignant lesions, especially atypical ductal and atypical lobular hyperplasia [6].

Therefore, it is important for pathologists, oncologists and radiologists not only to recognize and distinguish BBD from breast cancer but also to have an in depth knowledge of the pattern of occurrence of these disorders in their localities.

Though a few studies have been done on BBD in Nigeria, there remains a definite paucity of information on this group of disorders in this Centre.

This study seeks to determine the clinical, demographic and histopathological pattern of BBD in University of Port Harcourt Teaching Hospital (UPTH).

II. Materials and methods

This is a 9 year (2006-2014) prospective study of all patients who presented with benign breast lump to the surgical outpatient department of UPTH.

Excision biopsy was done on all the patients, because they all insisted on having the lumps excised. Histology reports were obtained from the same institution. Information on age at presentation, parity, duration of symptoms before presentation, side and quadrant of the breast affected, widest diameter of the lump, other associated features and histological diagnosis were collected and analyzed using SPSS version 17.

Patients with borderline lesions like phylloides tumour as well as inflammatory lesions were excluded from the study.

III. Results

There were 308 patients with benign breast lumps. They were all females and their ages ranged from 12 to 43 years with a mean age of 24.8± 7.8 years. The peak age incidence was 20-29 years and this constituted about 49.3% of the total population TABLE 1.

Table 1 Age distribution of patients

Age Group (years)	No. Of Patients (%)
10-19	84(27.3)
20-29	152(49.3)
30-39	40(13.0)
40-49	32(10.4)
>50	0(0)

Fibroadenoma was the commonest benign tumor accounting for 220 (71.4%) cases with a mean age of 23.7±7.7 years and 20-29 years as the peak age incidence. This was followed by fibrocystic disease which accounted for 64 (20.8%) cases with a mean age of 26.9±7.5 years and 20-29 as the peak age incidence. Other less common tumors were Sclerosing adenoma, duct ectasia, dystrophic calcification and simple mammary cyst (TABLE 2).

Table 2: Age Distribution of Specific Lumps

AGE GROUPS	FA	FCD	DE	SA	DC	SMC
10-19	80	4	0	0	0	0
20-29	96	48	4	8	0	4
30-39	24	8	0	0	0	0
40-49	20	4	0	4	4	0
>50	0	0	0	0	0	0
TOTAL (%)	220(71.4)	64 (20.8)	4 (1.3)	12 (3.9)	4 (1.3)	4 (1.3).

* FA= Fibroadenoma, FCD=Fibrocystic Disease, DE= Duct Ectasia, SA=Sclerosing Adenoma, SMC= Simple Mammary Cyst

There was associated pain in 48 (15.6%) cases, nipple discharge in 16 (15.6%) cases and ipsilateral axillary lymphadenopathy in four (1.3%) cases. The right breast was affected in 156 (50.6%) cases and the left in 152 (49.4%). The upper outer quadrant was the commonest site of occurrence, seen in 152 (49.3%) patients followed by upper inner quadrant in 56 (18.2%) patients, lower outer in 56 (18.2%) patients, lower inner in 24 (7.8%) patients, central in 16 (5.2%) patients and all quadrants in four (1.5%) patients (TABLE 3).

TABLE 3: Quadrants Involved

Quadrants	No Of Patients (%)
Upper Outer	152(47.3)
Upper Inner	56(18.2)
Lower Outer	56(18.2)
Lower Inner	24(7.8)
Central	16(5.2)
All Quadrants	4(1.3)

The mean diameter of the lumps ranged from 0.5cm to 24cm with a median size of 3cm (2-5cm).The duration of symptoms before presentation at the hospital ranged from 4 days to 192 months with a median duration of 6 months (3-24 months). Majority of the patients (37.6%) presented between 1-3 months (table 4).

TABLE 4: Duration of Symptoms before Presentation

Duration (months)	No Of Patients (%)
<1	20(6.5)
1-3	116(37.6)
3-6	40(13.0)
6-9	16(5.2)
9-12	32(10.4)
>12	84(27.3)

IV. Discussion

Benign breast diseases include a heterogeneous group of conditions belonging to deformities or abnormalities of the breast. In our study, all the patients were females. This is consistent with findings from previous studies where females predominated [7]. This is because females are more anatomically endowed with greater breast volume and more complex structural architecture while men have rudimentary breast due to lack of response to hormonal changes.

The overall mean age of the patient is 24.1 ± 7.8 years and peak age at 20-29 years. This was similar to the findings by Uwaezuoke et al [8] and Olu-Eddo et al [9], where the mean ages of their patients were 29.1 and 27.5 years respectively and peak age noted at the third decade of life. This trend is attributable to the changes in physiological and hormonal influence on the young female breast. There is also a global increase in the level of awareness of the morbidity and mortality associated with breast diseases particularly breast cancer which has led to increase anxiety with resultant increase presentation to health care facilities when breast lumps are detected.

Fibroadenoma was the commonest BBD in this study accounting for 71.44% of cases. This was also the finding of most studies done previously in Nigeria like Benin, Ile-Ife and Enugu where fibroadenoma predominated, accounting for 43, 59.1 and 44% respectively [9,10,11]. It is also the commonest BBD in Ghana and United States of America accounting for 70 and 48% respectively [12, 13]. Nevertheless, in Kano, fibroadenoma was found to be the second commonest BBD, seen in 28.8% of cases, a finding consistent with reports from Pakistan and Jamaica where fibroadenoma accounted for 29.4 and 33% respectively. [5, 14, 15] A racial predilection of Negroes to fibroadenomas of the breast has however, been previously documented [13]. This may partly be attributed to genetic, diet and geo-ethnic variations. From this study, there is a sharp increase of fibroadenoma in the second decade with a peak in the third followed by a drastic fall in incidence. This is consistent with the findings of other workers [9, 16]. The mean age of patients with fibroadenoma from our study is 23.7 years. This is similar to the reports from Benin (22.9 years) and Ibadan (24.4 years) [9, 17].

Fibrocystic disease was the second commonest BBD seen in our study, accounting for 20.8% of cases which was consistent with 23.8 and 22.9% reported in Benin and Enugu respectively [9,11]. From our study, a vast majority of patients with fibrocystic disease (71.4%) were in the third decade. Khanzada et al [18] and Rashid et al [19] from Pakistan have also documented fibrocystic disease as the second commonest BBD after fibroadenoma accounting for 21 and 17% respectively [18,19]. Chaudhary et al [20] in his study of 234 patients found fibrocystic disease as the commonest BBD with peak age at the fifth decade of life while Kamal et al [21] found that about 65% of patients with fibrocystic disease were from 31 to 50 years of age and peak incidence in the fourth decade. The difference between the age groups in patients with fibrocystic disease differs geographically possibly due to the differences in the age at menarche and parity, breast feeding procedures, use of oral contraceptive pills and self-awareness [18]. It has been documented recently that fibrocystic changes constitute the most common BBD and such changes generally affect the pre-menopausal women between 20 and 50 years of age [22,23]. Although, many other names have been used to describe this entity over the years including fibrocystic disease, cystic mastopathy, chronic cystic disease, mazoplasia and Reclus's disease. The term "fibrocystic disease" is now preferred because this process is observed clinically in up to 50% and histologically in 19% of the women [18].

Sclerosing adenoma is a lobulocentric lesion of disordered acini, myoepithelial and connective tissues, may be difficult to distinguish from infiltrating cancer and may occur in association with other epithelial

hyperplasia. It may also co-exist with invasive and in situ cancer [24, 25]. It has been classified as a proliferating lesion without atypia, having a risk of 1.3 to 1.9 for invasive cancers [24]. This lesion accounted for 3.9% of the cases in this study.

Other BBDS encountered in this study were duct ectasia, simple mammary cyst and dystrophic calcification. Their frequencies were low and they exhibited no particular age relationship.

V. Conclusion

Pattern of BBD in this study is similar to previously documented reports. They are common in females of reproductive age with fibroadenoma as the commonest in our hospital seen mostly in the second and third decades.

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