

Clinical Features and Pattern of Presentation of Breast Diseases in Surgical Outpatient Clinic of a Suburban Tertiary Hospital in South-West Nigeria

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ABSTRACT

Objective: To characterize the clinical features and pattern of presentation of breast diseases as observed in our practice.

Materials and Methods: A prospective study of 121 consecutive patients with breast complaints presenting in our Surgical Outpatient Clinics. The relevant data were collected by two surgeons using the prescribed forms and was analyzed using Epi Info 2003, Mann-Whitney (test of two groups) Chi-squared and Fishers exact test was used to compare parameters of benign and malignant groups. *P* value <0.05 was considered as significant. **Results:** One hundred and nineteen patients were females, two were males. The age range was 14–70 years. Forty two (34.7%) patients were in the 21–30 year age group. The commonest symptoms were breast lump in 111 (91.7%) patients, and breast pain in 28 (23.1%) patients. Breast pain was a significant presenting complaint in patients with breast malignancy (*P*=.026). On clinical examination 103 (85.1%) patients had palpable lumps, and seven patients were normal. Forty four patients (36.3%) had malignant disease, seventy patients (57.8%) had benign breast diseases and seven were normal. Fifty nine of the 70 benign diseases were fibroadenoma. One hundred and three patients (85%) had appropriate therapy, while 18 patients (14.8%), including eight with malignant disease absconded. **Conclusion:** In the study, a breast lump was the commonest clinical feature of breast disease. Over 60% of these were benign. Breast pain was a statistically significant presentation in patients with malignant breast disease. One in seven of the patients absconded.

KEYWORDS: Breast lumps, breast malignancy, breast pain, fibroadenoma

INTRODUCTION

A review of literature^[1-4] on breast disorders in our environment shows that more attention is devoted to the histopathological characteristics of the lesion with little discussion of the clinical perspectives.

Breast symptoms are common occurrences in the female. Some of this may just be trivial and respond to simple remedies. However, some symptoms become source of concern for both the patient and the attending physician especially when they become persistent. The major concern has been the possibility

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of occurrence of breast cancer. Breast cancer is usually asymptomatic in the early stages during which it is curable, this is the paradox of breast cancer.^[5] Therefore, screening for breast cancer appears to be the viable option in reducing the mortality and morbidity of breast cancer.^[5]

Surgical evaluation of the symptomatic patients by triple assessment, namely, clinical examination of the breast, mammography, and breast biopsy for definitive histological diagnosis is required in many patients.^[6]

There are few studies in our environment on the clinical aspects of breast diseases.

This is a prospective study of the clinical features and pattern of presentation of breast diseases in surgical outpatient clinic of our hospital.

MATERIALS AND METHODS

This is a prospective study of all patients presenting with breast symptoms from July 2005 to December 2006 at the Surgical Outpatient Clinic of Olabisi Onabanjo University Teaching Hospital, Sagamu.

The attending surgeon was required to fill a form containing the patients data such as age, sex, educational background, occupation, symptoms, duration of symptoms, past history of

breast disease, family history of breast disease, age at menarche, menstrual status, parity, history of breast feeding, height, weight, findings on clinical examination, biopsy technique, diagnosis and treatment at the time of initial consultation and the form was updated at subsequent visits. In order to minimize inter observer errors the first ten patients were seen jointly. Patient's height in meters and weight in kilograms were measured by trained nursing staff in the surgical outpatient department. These measurements are routine for all patients attending surgical clinics. Body mass index was calculated for each patient. No patient was excluded. Patients who absconded from follow up or without definitive diagnosis are recognized as such.

The study was approved by the ethical review committee of the hospital and the patients gave informed consent.

The patients with breast disease were then grouped into benign or malignant disease.

Results were analyzed using Epi info 2003. Mann-Whitney, (Test of two groups) Chi-squared and Fisher's exact test was used to compare parameters of benign and malignant groups. *P* value <0.05 was considered as significant.

Study limitations

High cost of investigations which individual patient had to bear restricted the scope of investigations as there is no health insurance program. Only three patients had mammography (two with fibroadenosis, one with normal breast). Triple assessment could not be done for most patients because of the high cost of mammography. Most patients presented with large tumors and biopsy was taken straight away in order to minimize cost.

RESULTS

One hundred and twenty one patients were seen during this period, two males and 119 females. The two males had gynecomastia. The age range was 14–70 years and the mean age was 34.7 years with standard deviation (SD \pm 14 years). Forty two (34.7%) patients were in the 21–30 year age group. Mean age (range) at menarche was 14.8 (11–18) years. Forty two (34.7%) patients were students, 32 patients (26.4%) were traders. The educational level was graduate/undergraduate in 50 patients (41.3%), and senior secondary school level in 28 patients (23.1%). The commonest symptoms were, breast lump in 111 patients, (91.7%) and breast pain in 28 patients (23.1%) [Table 1]. Duration of symptoms range was 1-416 weeks; the mean was 41 weeks and mode was 12 weeks. Parity mean (range) was 2 (0-9). Twelve patients (10%) had past history of breast disease, two patients (1.6%) had family history of breast disease. Sixty patients (49.5%) had children and all of them breast fed their children. Sixteen patients (13%) were postmenopausal. The body mass index (BMI) mean (range) was 24.6 (18-51) kg/m². On clinical examination 103 patients (85.1%) had palpable lumps, while seven patients (5.7%) were normal [Table 2].

Eighty four patients had open biopsy; twenty four patients had FNAC (Fine Needle Aspiration Cytology) while 20 patients had no tissue diagnosis. The clinical diagnosis of malignancy in 44 (36.3%) patients was confirmed by histology in 40 patients. The remaining four patients did not have a biopsy as they defaulted. Clinical diagnoses in the remaining patients without biopsy were, gynecomastia in two, mastitis in three patients, fibroadenosis in four and seven patients were normal. Seventy patients (57.8%) had benign breast diseases out of which 59 (48.7%) were fibroadenoma [Table 3]. A comparison of the mean age, parity, age at menarche, symptoms, duration of symptoms, history of breast feeding, and BMI in the patients with benign disease and malignant disease is depicted in Table 4.

Of the forty patients with histological diagnosis of malignant disease, only 9 (22.5%) had T₁-T₂, N₀, M₀ tumors. Ten patients had T₄, N₂, M₁ (metastases in chest and abdomen) tumors, six had T₄, N₁, Mx tumors, 15 had T₃, N₁, M₀ tumors (late disease 31, early nine).

One hundred and three patients (85%) had appropriate therapy while 18 patients (16%) absconded and did not have the therapy indicated. These included four patients with histologically confirmed breast malignancy and four patients with clinical diagnosis of breast cancer.

Table 1: Presenting breast complaints in 121 patients

| Complaints | Frequency | Percentage |
|---------------|-----------|------------|
| Lump | 111 | 91.7 |
| Pain | 28 | 23.1 |
| Axillary lump | 3 | 2.5 |
| Ulceration | 9 | 7.4 |
| Large breast | 2 | 1.6 |

Some patients had more than one presenting complaint

Table 2: Breast examination findings in 121 patients with breast symptoms

| Complaints | Frequency | Percentage |
|--------------------|-----------|------------|
| Lump | 103 | 85.1 |
| Normal | 7 | 5.7 |
| Inflammatory signs | 12 | 9.9 |
| Ulceration | 9 | 7.4 |
| Breast enlargement | 2 | 1.6 |

Some patients had multiple signs

Table 3: Clinical diagnosis

| Diagnosis | Frequency | Percentage |
|---------------|-----------|------------|
| Fibroadenoma | 59 | 48.7 |
| Carcinoma | 44 | 36.4 |
| Normal | 7 | 5.7 |
| Fibroadenosis | 6 | 5.0 |
| Gynecomastia | 2 | 1.7 |
| Mastitis | 3 | 2.5 |
| Total | 121 | 100 |

Table 4 Comparison of parameters in benign and malignant groups

| Parameter | Malignant 44 | Benign | Test | P value |
|-----------------------|-----------------|-----------------|---------------------|---------|
| Mean age | 47±11.28 (SD) | 27±9.7 (SD) | Mann-Whitney | 0.000 |
| Parity | 4±2 | 1±1 | Mann-Whitney | 0.000 |
| Menarche | 15 + 2.66 | 14.7 | Mann-Whitney | 0.571 |
| Symptom duration | 28.5±47.6 weeks | 47.5±90.3 weeks | | |
| Symptom | | | | |
| Lump | 44 | 70 | Fisher's exact test | |
| Pain | 18 | 10 | | 0.026 |
| No pain | 26 | 60 | | |
| BMI (body mass index) | 28.5±7.08 | 22.72±4.1 | Mann-Whitney | 0.0001 |
| Breast feeding | | | | |
| Yes | 40 | 20 | Chi-squared | 0.000 |
| No | 4 | 50 | | |

DISCUSSION

Breast disorders are primarily an affliction of women, however about 1% of breast cancer occurs in the male.^[7] In this study, the two (1.8%) male patients had gynecomastia, a benign disease. The mean age of presentation of patients with benign breast diseases was 27.7 years (SD 9.7) which was two decades less than 47 years (SD 11.2) observed in the patients with malignant breast disease. This is comparable to the findings of Ochicha *et al.*^[8] and Ihekweba.^[9]

36.2% of the subjects were students and the educational level was graduate/undergraduate in 43.9% of the subjects, this rather high relative literacy rate is probably due to the suburban location of our practice. This relative high literacy rate may be expected to translate into early presentation of symptoms in hospital but was not quite so as discussed below.

Presenting complaints were lumps in 91.7% of patients, which is not surprising in a surgical outpatient were the main reason for referral is to determine the nature of the lump.

Breast pain is usually associated with benign breast disease,^[10] in this study 18 patients out of 28 patients who had pain as a presenting complaint had carcinoma of the breast ($P<0.05$). This can be attributed to the advanced stage of the disease at which these patients present, 31 patients out of forty who had malignancy presented with late disease.

Long duration of symptoms with subsequent late presentation conforms to the finding of other workers.^[8,9,11] The mean duration of symptoms for patients with malignant breast disease was (28.5 weeks SD 47.6) less than mean duration of symptoms in patients with benign disease (47.5 weeks, SD 90.5). The onset of local features of malignancy such as skin changes, ulceration, rapid growth of the lesion and pain is probably the reason for this observation.

The parity mean for patients with malignancy was significantly higher than those with benign disease (4. SD 2 versus 1. SD 1,

P value <0.05). This observation is a reflection of the age incidence since patients with benign disease are much younger than those with malignancy and have not had enough time to undergo repeated cycles of pregnancy.

Family history of breast disease is a predisposing factor in development of breast malignancy:^[12] Women with one affected first degree relatives have twice the risk of women without affected relatives in developing breast cancer and the risk increases as the number of affected relative increases,^[13] but in this study only 1.8% of the patients had family history of breast disease.

Previous breast disease is another risk factor for breast cancer^[8] but in this study only 10.2% of patients had previous breast disease. Previous history of certain types of benign breast disease such as atypical ductal or lobular hyperplasia are associated with a higher risk of breast cancer.^[14] Also the risk of breast cancer survivor of developing second cancer in the other breast is about 10–15% at 15 years.

Breast feeding reduces the risk of developing breast malignancy; this is due to the hormonal changes that occur during lactation. Of the 60 patients who breast fed their infants 40 had breast cancer versus 20 with benign breast disease ($P<0.05$). This finding is also a reflection of the age incidence as earlier discussed. This apparent loss of risk reduction for breast cancer associated with breast feeding is likely to vanish if the confounding factor of age is removed by comparing benign and malignant cases of the same age.

Obesity is one of the recognized risk factors in breast cancer,^[15] in this study the mean body mass index (BMI) was significantly less in the benign group compared with the malignant group (22.72 kg/m² S.D. 4.1 versus 28.5 kg/m² SD 7.08, $P<0.05$).

Clinical breast examination is very important in the initial assessment of a breast complaint, and its sensitivity is about 85%.^[16] Therefore, further evaluation with mammography and ultrasonography in cases when the examination is normal is

required. In this study seven patients (6.1%) had normal breast examination and 103 patients (85.1%) had palpable lumps. The reason for this being the surgical nature of the practice as discussed above.

Biopsy for histological diagnosis is imperative in the presence of a lump whether it's palpable or not. Tissue diagnosis was obtained in 94 patients, of which 84 patients had open biopsy which was also therapeutic in patients with fibroadenoma. Excisional biopsy is needed if fine needle aspiration cytology (FNAC) or needle biopsy is not conclusive. Eighteen patients including four patients with clinical diagnosis of breast malignancy did not have any form of biopsy as they absconded or declined further treatment. Declining diagnostic or treatment procedures which are surgical are not uncommon in our environment.^[17] Many reasons have been adduced for this including poor socioeconomic situation, cultural and religious beliefs.^[9,18,19]

Forty (35%) patients who had some form of tissue diagnosis had breast cancer; this is higher than that reported by Yussuf *et al.*, who reported 26% breast cancer in a study of breast masses biopsy in Zaria (Northern Nigeria).^[11]

Fibroadenoma is the commonest breast lesion (46.5%) in this study, this correlates with the observation of other workers.^[20] Fibroadenoma is commonest in the young nulliparous female. In this study, 42 out of 52 patients with fibroadenoma were less than 30 years old ($P < 0.05$).

Eighteen patients (15.8%) did not have the indicated therapy as they absconded from follow up. This group included patients with confirmed breast cancer. This observation is not different from the findings of other workers in our locality. Various reasons for this high default rate include undue fear of mastectomy, lack of finance, socio cultural beliefs, and activities of unorthodox or alternative medical practitioners.^[9,17-19]

CONCLUSION

In the study, a breast lump was the commonest clinical feature of breast disease. Over 60% of these were benign. Breast pain was a statistically significant presentation in patients with malignant breast disease. One in seven of the patients absconded and did not have therapy.

Further studies are required to look at this problem of high default rate especially in patients with confirmed malignant breast disease.

REFERENCES

1. Ntekim A, Nufu FT, Campbell OB. Breast cancer in young women in Ibadan, Nigeria. *Afr Health Sci* 2009;9:242-6.

2. Gukas ID, Jennings BA, Mandong BM, Igun GO, Girling AC, Manasseh AN, *et al.* Clinicopathological features and molecular markers of breast cancer in Jos. *West Afr J Med* 2005;24:209-13.
3. Katchy KC, Datubo-Brown DD, Gogo-Abite M, Iweha UU. Clinical and pathological features of breast cancers in rivers state, Nigeria. *Eur J Surg Oncol* 1989;15:217-9.
4. Anyanwu SN. Fibro-adenoma of the breast in Nigerian Igbos. *S Afr Med J* 2000;90:1223-6.
5. American Cancer Society. Breast cancer facts and figures. Atlanta: American Cancer Society. Available from <http://www.cancer.org/downloads/STT/2008CAFFfinalsecured.pdf>. [Last accessed on 2009 Aug 12].
6. Saunders CM, Baum C. The breast in bailey and love's short practice of surgery. In: Russell RC, Williams NS, Bulstrode CJ. 23rd ed. Book, Arnold, London, 2000. p. 750-2.
7. Kidmas AT, Ugwu BT, Manasseh AN, Iya D, Opaluwa AS. Male breast malignancy in Jos university teaching hospital. *West Afr J Med* 2005;24:36-40
8. Ochicha O, Edino ST, Mohammed AZ, Amin SN. Benign breast lesions in Kano. *Nig J Surg Res* 2002;4:1-5.
9. Ihekwa FN. Breast cancer in Nigerian women. *Br J Surg* 1992;79:771-5.
10. Smith RL, Pruthi S, Fitzpatrick LA. Evaluation and management of breast pain. *Mayo Clin Proc* 2004;79:353-72.
11. Yussuf LM, Odigie VI, Mohammed A. Breast masses in Zaria Nigeria. *Ann Afr Med* 2003;2:13-6.
12. Madigan PM, Ziegler RG, Benichou J, Byrne C, Hoover RN. Proportion of breast cancer cases in the United States explained by well-established risk factors. *J Natl Cancer Inst* 1987;87:1681-5.
13. Collaborative Group on Hormonal Factors in Breast Cancer. Familial breast cancer: Collaborative reanalysis of individual data from 52 epidemiological studies including 58,209 women with breast cancer and 101,986 women without the disease. *Lancet* 2001;358:1389-99.
14. Dupont WD, Parl FF, Hartmann WH, Brinton LA, Winfield AC, Worrell JA, *et al.* Breast cancer risk associated with proliferative breast disease and atypical hyperplasia. *Cancer* 1993;71:1258-65.
15. Surmacz E. Obesity hormone leptin: A new target in breast cancer? *Breast Cancer Res* 2007;9:301.
16. Eltahir A, Jibril JA, Squair J, Heys SD, Ah-See AK, Needham G, *et al.* The accuracy of "one-stop" diagnosis for 1100 patients presenting to a symptomatic breast clinic. *J R Coll Surg Edinb* 1999;44:226-230.
17. Ajekigbe AT. Fear of mastectomy: The most common factor responsible for late presentation of carcinoma of the breast in Nigeria. *Clin Oncol* 1999;3:78-80
18. Sandelin K, Apffelstaedt JP, Abdullah H, Murray EM, Ajuluchuku EU. Breast Surgery International—breast cancer in developing countries. *Scand J Surg* 2002;91:222-6.
19. Adebamowo CA, Ajayi OO. Breast cancer in Nigeria. *West Afr J Med* 2000;19:179-91.
20. El-Wakeel H, Umpleby HC. Systematic review of fibroadenoma as a risk factor for breast cancer. *Breast* 2003;12:302-7.

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