

BENIGN BREAST DISEASES IN AN AFRO-CARIBBEAN POPULATION

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ABSTRACT

Background: The diagnosis and effective treatment of benign breast disease still remains a clinical challenge and the need for surgical intervention has not been clearly defined.

Objectives: To determine the patterns of benign breast disease in an Afro-Caribbean population in order to define the patterns of disease encountered and to review the approach to diagnosis and treatment.

Methods: A review of all breast biopsy operations performed for benign disease at the Kingston Public Hospital, Jamaica was made by examining a total of 333 patient records over a two year period.

Results: Of the cases reviewed this study clearly showed that the majority of benign breast lesions were due to fibrocystic disease (41%) and fibroadenomas (33%). Intraduct papillomatosis which accounted for 6.7% was the next in frequency. Other diseases found included fat necrosis 12 (4.4%) with breast abscess and mammary duct ectasia in eight patients (3%) each. Fourteen patients (5%) had no diagnostic abnormality. The mean age of patients with fibroadenoma was 20 years whereas the mean age of patients with fibrocystic disease was 40 years. The co-existence of fibrocystic disease with malignancy was reported in 15 cases.

Conclusion: Benign breast disease in this population occurs mainly in young women less than 30 years of age. Eighty per cent of breast biopsies done in patients with palpable lumps are for benign disease. The data support a more conservative approach to diagnosis and management of these patients.

INTRODUCTION

Benign breast lesions are the commonest breast tumours seen in clinical practice. Fibroadenomas are found most frequently in young women and together with fibrocystic disease are the two benign diseases of the breast most often encountered.

Because of the ubiquitous presentation of these benign disorders, excision biopsy is usually necessary to exclude the presence of malignancy. A thorough acquaintance with the diversity of these lesions is necessary since the majority of biopsied lumps particularly in young women are benign(1,2).

The abundance of information in the current surgical literature has outlined in detail the presentation of carcinoma of the breast with neglect of the more common benign lesions. This has resulted in undue anxiety about the likelihood of malignancy in all patients presenting with a suspicious lesion in the breast necessitating surgical excision in the majority. Attention is now being focussed on a policy of conservative management of fibroadenomas in selected patients in whom it has been shown to be safe and acceptable(3,4). The purpose of this study was to determine the common pathological types of benign breast disease seen in an Afro-Caribbean population and to establish a basis for further study.

MATERIALS AND METHODS

The clinical and pathological data on 333 consecutive patients who underwent biopsy at the Kingston Public Hospital, Jamaica over a two year period were reviewed. Each patient had excision biopsy performed with paraffin sections stained using haematoxylin and eosin. Pathological specimens were processed and examined by a group of senior pathologists. Specimens deemed to be benign were further examined. Biopsies were performed under local anaesthesia in an outpatient facility.

RESULTS

Of the 333 patients, 65 (20%) were malignant and 268 (80%) benign. There were 110 (41%) patients with fibrocystic disease, 90 (33%) fibroadenomas and, 18 (7%) intraduct papillomas, 12 (4%) with fat necrosis and 14 patients (5%) with no diagnostic abnormality. There were eight patients (3%) with mammary duct ectasia and seven patients (3%) with breast abscesses. The remaining nine patients had a variety of pathological diagnoses (Table 1). The mean age of 268 patients with benign disease was 30 years (range 14-75 years). Eighty-two per cent of the patients with fibroadenoma presented before 30 years of age with the majority of patients in the 16- 25 year age group.

Table 1

Histological types of benign breast disease in 268 patients

Diagnosis	No. (%)
Fibrocystic disease	110 (41)
Fibroadenoma	90 (33)
Intraduct papilloma	18 (7)
No diagnostic abnormality	14 (5)
Fat necrosis	12 (4)
Mammary duct ectasia	8 (3)
Breast abscess	7 (3)
Lipoma	2 (1)
Cylindroma	2 (1)
Galactocoele	2 (1)
Foreign body granuloma	1
Neurofibroma	1
Lymphadenitis	1

The mean age of patients with fibroadenoma was 20 years with a range of 14-56 years. Forty per cent of the patients with fibrocystic disease presented before 30 years. Fifty one patients (85%) with fibrocystic disease were in the 20-50 year age group with 10% of the patients less than 21 years. The mean age of the patients with fibrocystic disease was 40 years with a range of 16-75 years. Fibrocystic disease was found to co-exist with breast carcinoma in 15 cases and infrequently with fibroadenoma, intraduct papilloma and mammary duct ectasia. Histological features of fibroadenoma showed a predominance of stromal elements together with the presence of several ducts and acini.

Several histological patterns were noted in patients with fibrocystic disease characterised by fibrosis, cystic change and ductal epithelial hyperplasia. In some patients one element was entirely predominant. The mean age of patients presenting with intraduct papilloma was 41 years with an age range of 22-67 years. Histological patterns were typical. Fat necrosis was seen in 12 patients with a mean age of 40 years. No diagnostic abnormality was present in 14 patients (5%).

DISCUSSION

The results of this study show that fibrocystic disease was the most common benign breast disorder in our unit with fibroadenoma the most frequent benign neoplasm. The majority of patients requiring breast biopsy in our population were young women less than 30 years of age. The study also showed that 80% of all biopsies done for patients presenting with a palpable abnormality of the breast were for benign disease.

These findings are similar to those of other reports from Africa(1,2) and India(5) where patients presenting with benign breast disease were less than thirty years and typically in the 20- 25 year age range. The population of Jamaica is predominantly of African descent and this may account for the similarity with the findings of Otu *et al*(1). Similarly the mean age at presentation in our patient population was lower than that reported from Western

countries(6-8). In Haagensen's series of 402 patients the median age of presentation was 33 years(9).

In our population, fibrocystic disease was the most frequent diagnosis accounting for 41% of lesions. This occurrence varies from the experience of Otu *et al*(1) and Adeniji *et al* (10) who reported fibroadenoma as the most common benign disease followed by fibrocystic disease in 69% and 59.1% of patients respectively.

Fibrocystic disease was found with greatest frequency in the 20 to 50 year age group with a mean age of 40 years. The features of fibrocystic disease are most marked in the premenopausal period where cyclical breast pain accompanied by nodularity and increased breast density on mammography make evaluation of the breast to exclude malignancy difficult. Postmenopausal patients with symptomatic fibrocystic disease are uncommon and typically present with non-cyclical breast pain(11). Because of the early presentation and the preponderance of benign breast disease as a biopsy diagnosis in young women in our population, careful thought should be given to utilising fine needle aspiration cytology and core needle biopsy to evaluate young patients with palpable or mammographically detected lesions. The accuracy of core needle biopsy for diagnosis in benign and malignant disease is well established. With adequate smears, cytology has been shown to be highly specific and could be used to determine treatment if the result is positive thus safely avoiding unnecessary biopsy(12). A prospective study in which patients younger than 30 years with negative pathology on needle or core biopsy should provide answers to these questions.

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