Benign breast lesions in Kano

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ABSTRACT

Background: Non-malignant diseases of the breast have assumed increased importance in recent times because of public awareness of breast cancer. This study was carried out to look closely at benign breast lesions in Kano with a view to comparing with data from other centres in Nigeria and abroad.
Method: A five-year retrospective review of all histopathologically proven benign breast lesions in the two major hospitals in Kano was carried out. The data were analysed on the basis of the histopathological types, age and sex distribution.
Results: Benign breast lesions accounted for 160 (73%) of all breast biopsies seen, and 71.9% of breast diseases in women with a benign to malignant ratio of 2.6 to 1. The mean age at presentation was 26 years. Fibrocystic disease was the commonest histological lesion comprising 55 (34.3%) of all cases, with a mean age of 33 years. This was followed by fibroadenoma accounting for 28.8% with a mean age of 21 years, thus occurring a decade earlier than fibrocystic disease of the breast. Inflammatory breast diseases accounted for 8.1%.
Conclusion: This study has shown that benign diseases are common in our environment, and with few exceptions our data was comparable to other Nigerian series, but slightly at variance with the developed world.

Keywords: Benign breast lumps, Nigeria.

Introduction

Benign breast diseases encompass a wide range of lesions including inflammatory, neoplastic, and aberrant hormonal response disorders. Increasing awareness of breast cancer (the commonest female malignancy worldwide) [1] has stimulated profound interest in benign breast lesions since certain epithelial benign breast diseases have been associated with malignant transformation.[2] Studies in Nigeria and abroad document an overwhelming preponderance of benign

over malignant breast diseases. [2-7] In a review of benign breast diseases in Nigerian women by Oluwole et al, [3] it was said to be three times as common as malignant breast diseases. But the prevalence of breast cancer is increasing especially in communities that hitherto reported low incidence; a recent report from Ibadan cancer registry, showed that breast cancer has overtaken cancer of the cervix in hospital based incidence[8] Similarly, a recent review of solid cancers in Zaria by Rafindadi showed that breast cancer was second only to cancer of the cervix. [9] The literature on non malignant breast diseases in the African population is said to be scanty, and the true incidence is not known.[3] Most Nigerian studies on benign breast diseases were carried out in the South, with few from the North, [10] and may not be representative of the whole country, [2,3,5,7,10] in view of the environmental and genetic differences. There has not been any published work on benign breast diseases from our centre, which is a major referal centre in northwestern Nigeria, hence, the relevance of this study. The objective of this study is to evaluate the histopathological pattern, age and sex distribution of these lesions in Kano, the most populous city in Northern Nigeria.

Materials and Methods

Histopathology sections of all breast biopsies sent to the pathology laboratories of Murtala Mohammed Specialist (MMSH) and Aminu Kano Teaching Hospitals (AKTH) from 1995 to 1999 were reviewed. Clinical data were obtained from histology request forms. MMSH and AKTH are two of the three tertiary health institutions offering histopathology services in Kano. The third hospital is an orthopaedic hospital, hence its exclusion from this series. The cases were analysed on the basis of age, sex and histological lesion. Patients without surgical biopsies were excluded from this study.

Results

Two hundred and nineteen breast biopsies were examined during period. There were 160(73%) benign lesions to 59(27%) malignancies, and 210 females (95.9%) to 9 males (4.1%) with a male to female ratio of 1:23. Out of 210 females with breast disease, 151(71.9%) were benign, while 59(28.1%) were malignant with a ratio of 2.6 to 1. The age range of patients with benign breast disease in this study was 16 to 60 years, with a mean of 26 years. Table 1 shows the mean ages and sex distribution of the benign breast lesions. The various histological types are shown on table II. Fibrocystic disease (FCD) was the commonest benign lesion accounting for 55 cases (34.3%), with a mean age of 33 years. This was followed by fibroadenoma, which accounted for 46 (28.8%), with a mean age of 21 years. Other less common lesions including Phylloides tumor, galactocoele, lipoma, duct papilloma, and blunt duct adenosis, constituted 17(23%) of benign lesions. There were 13 (8.1%) inflammatory lesions comprising chronic mastitis, duct ectasia, granulomatous mastitis and fat necrosis with a mean age of 27 years. Gynaecomastia, which was the only benign lesion in males, constituted, 9 (6%) of benign breast diseases.

Table 1: Age and sex of patients with benign breast lesions in Kano

Breast lesions	Mean age (Years)	M	F
Malignant lesions	46	-	59
Fibrocystic disease	33	-	55
Fibroadenoma	21	-	46
Inflammatory diseases	27	-	13
Gynaecomastia	23	9	-
Others	26	-	37
Total		9	210

Table 2: Relative frequency of breast lesions in Kano

Histological diagnosis	No.	% of breast lesions	% of benign breast lesions
Malignant lesions	59	27	-
Fibrocystic diseases	55	25	34
Fibroadenoma	46	21	29
Inflammatory diseases	13	6	8
Gynaecomastia	9	4	6
Others	37	17	23
Total	219	100	100

Discussion

As in most studies within and outside Nigeria, benign breast le ions in Kano overwhelmingly out number malignancies.[2-7, 11] The proportions however vary. In this study benign breast disorders comprised 73% of all breast lumps. This is comparable to 73.4% in Calabar [5] and 79% in Ife [3] but substantially lower than 90% reported from Benin.[2] These variations may not be a true reflection of the disorder in Nigeria since most of the studies are hospital based and can be influenced some variables.

The pattern of benign breast diseases in this study is at variance with the known pattern in blacks.[2, 3.7] Fibrocystic disease (FCD) emerged as the commonest benign breast lesion in Kano accounting for 34% of benign breast lumps. This is similar to Ibadan and Caucasian series, [11,12] but at variance with reports from Ife, [3,7] and Benin, [2] where fibroadenoma is the most common non-malignant breast disorder. The higher incidence of FCD in this study may be due to the fact that more patients with breast diseases now present to hospitals as a result of increased awareness than was hitherto the case.[3] In the USA, FCD constituted 40% of histologically diagnosed breast lumps and was present in 60-90% of autopsies, [12] making it more of a physiological aberration than disease. Hence the favoured term is fibrocystic change or Aberration of Normal Development and

Involution (ANDI).[13] The mean age at diagnosis of FCD in this study was 33 years comparable to 32 years in Ibadan [10] and 37 years in Ife[3] but lower than in the USA where it peaks just before menopause.[12]

Fibroadenoma was the second commonest non-malignant breast lump in this study. It accounted for 29% of benign lumps, comparable to 39.5% and 33.3% in Ibadan, [11] and Uganda, [14] respectively. This is much lower than 54% reported from Ife; [7] The prevalence was particularly high in Ife, because a disproportionately large number (60%) of respondents were college and university students in their twenties and late teens, the age group in which fibroadenoma is commonest.[7] There is also increased awareness in this category of patients. Fibroadenoma is said to occur in about 7% of whites in USA.[12] The relatively higher occurrence in African studies can be explained by the well documented racial predilection of Negroes to this neoplasm.[7, 15,16] The mean age in this study was 21 years similar to 21 years in Ife, 22 years in Ibadan, and consistent with 18-25 in Britain [7,11,13].

Inflammatory lesions comprised 6% of breast diseases in this review with a mean age of 27 years. This is comparable to 4.64% in Ife.[7] These figures are under-representative as many inflammatory lesions (especially infections) were managed without surgical biopsies; Breast abscess alone, accounted for 23.5% of benign breast diseases in Benin, south western Nigeria.[2]

Gynaecomastia was the only breast disease of males in this study. It comprised 4% of all breast lesions, which is comparable to 3.4% reported by Oluwole et al, [3] and 3.9% by Adeniji et al.[4] The incidence of this disease in Nigeria male patients compares well with the 1% quoted in Caucasian series, [15 but] lower than the 12% reported from Uganda.[13] The mean age of 23 years is slightly at variance with most published reviews, which report a bimodal age distribution at puberty/adolescence and in the elderly.[17, 18] Absence of elderly patients in this study can be attributed to our relatively shorter lifespan and less likelihood of older males to complain about what many of them consider a trivial cosmetic problem. Younger males on the other hand who are more likely to be embarrassed before their peers and the opposite sex seek medical attention thus providing valuable histopathology data. Pubertal/adolescent gynaecomastia usually regresses spontaneously. Resection is only carried out if it fails to regress within a few years thus explaining the relatively older mean age (23 years) in this surgical biopsy based study.

The results of this study has shown that benign breast diseases are nearly as three times as common as breast cancer, and that fibrocystic disease was the commonest contrary to the known pattern in Africans.

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