
Full Length Research Paper

Histopathological characteristics of breast lumps in the Igbos of Nigeria

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Breast lump is a common complaint among patients with gynaecology issues and it elicits anxiety regarding a possible malignancy. Breast diseases remain a major gynaecological problem in both developed and developing countries. How this affects the Igbos of Nigeria is yet to be elucidated. The objective of this study is to determine the histopathological characteristics of breast lumps in the Igbos of Nigeria. This was a retrospective review of the records of the histopathological department of a central reference pathology laboratory in Enugu between January and December 2014. The socio-demographic characteristics of the patients, clinical summaries and the histological diagnosis on breast tissues were extracted from the record. A total of 260 histological reports of breast samples were analyzed. Five (1.83%) of the specimens were males and 255 (98.17%) were females. The age range of patients was 13 – 75 years and parity ranged from 0 – 10⁺. Two hundred (78.90%) had benign disease out of which 85 (42.50%) were fibroadenoma. The mean age of presentation of patients with benign disease was 29.6 years as against 49.4 years for malignant diseases. Undifferentiated carcinoma (41.7%) was the most frequent breast cancer followed by invasive ductal carcinoma 15 (25.0%) and multiform carcinoma 10 (16.7%). The right breast was more affected by both the benign and malignant diseases. All the 5 male patients had gynaecomastia. In conclusion, the study has shown that the histopathological pattern of breast lumps in Igbos is not in variance with those of other developing parts the world. Benign breast diseases are commoner in Igbos than malignant diseases and fibroadenoma dominated the histological diagnoses of breast lumps.

Key words: Breast lumps, histopathology Igbos, Nigeria.

INTRODUCTION

Ethnic and geographical approach in medical research has revealed important patterns of diseases (Hutt MSR, 1972). Many ethnic groups remain to be explored worldwide, among them are the Igbos, a major group in south eastern Nigeria (Onuigbo, 1970). Breast disease remains a major gynaecological problem in both developing and developed countries. Ethnicity is a factor in disease distribution and within the same area persons living side by side and of different groups may have different diseases frequency (Hamazel, 1975; Robert, 1976). In the United Kingdom, breast cancer incidence is lower in South Asian and black women than in white women. This difference identified among the ethnic

groups are said to be due to association between reproductive risk factors and estrogen receptor status (Menes et al., 2007).

A study has shown that some diseases have the same trend in Igbos as in Nigeria elsewhere (Onuigbo, 1977). Cheung and Lam (2005) in India reported that the clinical presentation of breast lumps are more influenced by and geographical/regional factors. The aim of this study is to characterize the histological patterns of breast lumps in Igbos of Nigeria.

MATERIALS AND METHODS

The materials for this study were the histological reports on breast lump specimens sent to a central Reference Pathology Laboratory in Enugu Nigeria. It is a referral laboratory for institutions such as the University of Nigeria

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Table 1. Showing histopathological diagnosis.

Diagnosis	Frequency	%age	Sex	
			Female	Male
Fibroadenoma	85	32.7	85	
Cancer	60	23.1	60	
Mammary Dysplasia	50	19.2	50	
Adenoma	10	3.8	10	
Benign cyst	10	3.8	10	
Mastitis/ abscess	10	3.8	10	
Fat necrosis	10	3.8	10	
Gynaecomastia	5	1.9	-	5
Keloid	5	1.9	5	
Lymph	5	1.9	5	
Others	10	3.8	10	
Total	260	100	255	5

Table 2. Age distribution of the Benign lesions.

Age	Frequency	% age
10-19	31	15.5
20-29	96	48.0
30-39	61	30.5
40-49	9	4.5
≥ 50	3	1.5
Total	200	100

Teaching Hospital, Ituku-Ozalla, Enugu; Abia State University Teaching Hospital, Aba; Ebonyi State University Teaching Hospital, Abakaliki and the National Orthopaedic Hospital, Enugu. It also receives surgical specimens from general, mission and private hospitals in Abia, Anambra, Akwa-Ibom, Benue, Cross-River, Ebonyi, Enugu, Rivers and Imo States of Nigeria. Most of these institutions do not have a functional department of surgical pathology.

The reviewed reports were from those extracted between January and December 2014. A total of 260 histopathological reports on breast samples from Igbo patients were reviewed.

The reports contained the bio-data of the patients, clinical summaries and diagnoses. Also contained in the reports were the histopathological diagnoses on the specimens. The study was approved by the ethical review committee of the centre.

The information obtained were analyzed using Epi info 2003. Mann-Whitney (Test of two groups), Chi-square and Fishers' exact test was used to compare parameters of benign and malignant groups. P-value < 0.05 was considered as significant.

RESULTS

Two hundred and sixty (260) breast samples were examined during the study period. Out of these 200

(76.92%) had benign disease and 60 (23.08%) had breast cancer (Table 1). The benign to malignant breast ratio was 3.3:1. Fibroadenoma was the commonest breast disease sampled consisting of 85 (42.5%) of the benign breast conditions and 32.7% of the total breast diseases. Mammary dysplasia was the next common benign condition with 50 (25.0%) of the benign breast diseases. Majority of the patients with benign diseases were in the age range of 20 - 39 years as represented in Table 2. Fibroadenoma was commonest in the young nulliparous female with 75 out of the 85 patients less than 32 years (Table 3). The commonest histological subtype of breast cancer in the study was the undifferentiated category 25 (41.7%) followed by invasive ductal carcinoma 15 (25.0%) and multiform carcinoma 10 (16.7%) as seen in Table 4.

Most of the cancer patients were in the age range of 40 years and above.

The right breast was more affected by both the benign and malignant lesions as represented in Table 5. Five (5) of the 260 breast diseases were gynaecomastia a benign condition that affect males.

DISCUSSION

In this study of histological characteristics of breast lumps in Igbos, benign breast diseases were significantly more common than the malignant ones. Benign disease

Table 3. Age distribution of the malignant lesions.

Age range(years)	Frequency	%age
10-19	0	0.0
20-29	2	3.3
30-39	4	6.7
40-49	18	30.0
50-59	20	33.3
≥60	16	26.7
Total	60	100.0

Table 4. Histological subtypes of the cancers.

Histological type	Frequency	% age
Undifferentiated	25	41.7
Invasive ductal	15	25.0
Multiform	10	16.7
Medullary	5	8.3
Inflammatory	5	8.3
Total	60	100.0

Table 5. Showing position of lesions in the breast.

Quadrant	Benign	Malignant	Total
R.U.O.Q	92	40	132
R.U.I.Q	55	10	65
CENTRAL	15	5	20
L.U.O.Q	20	3	23
L.I.L.Q	18	2	20
	200	60	260

KEY: R = Right L = Left U = Upper O = Outer
I = Inner Q = Quadrant

comprised 76.92% of all breast lumps with a benign to malignant ratio of 3.3:1. This is similar to findings reported in other studies (Rahman et al., 2016; Jamal, 2001). Fibroadenoma with a prevalence of 42.5% of benign breast diseases topped the list of benign breast lump diseases. Our result is consistent with other studies elsewhere (Njeze, 2014; Anyikam et al., 2008; Yagdish et al., 2014; Ayoade et al., 2012).

This similarity in result could be due to the fact that genetic factors are not known to alter the risk of fibroadenoma, rather hormonal factors. The finding was however at variance with an earlier report in Enugu where mammary dysplasia preponderated. A study in Enugu found a dominance of mammary dysplasia (Njeze, 2014). In studies in Kano and Ilesha mammary dysplasia was found to be the commonest benign lesion (Ochicha et al., 2002; Adesusunkanmi et al., 2001). Regarding relation of various breast disorders to sex only 5(1.9%) cases of gynaecomastia was found involving the male breast. This compared well with findings in other studies (Rahman et al., 2016; Funderburk, 1972). Our finding was much lower than 12% reported in Uganda (Sainsbury, 2008).

Undifferentiated carcinoma of the breast was the most frequent breast cancer seen in this study followed by invasive ductal carcinoma (41.7%) and thirdly, multiform carcinoma (16.7%) as shown in Table 4. This finding contrast with other studies in India and Nigeria where infiltrating intraductal carcinoma predominated (Fente et al., 2011; Singh et al., 2011; Guyel et al., 2016).

The finding in Igbos could be due to late presentation of the patients. Noteworthy is the diagnosis of multiform carcinoma in five patients. Multiform carcinoma is a variant of ductal carcinoma in situ with micro-calcifications. This kind of breast cancer is rarely seen in literature. Onuigbo (2015) in a comparative study of breast cancer in a Swedish population and the Igbos, reported diagnosis of multiform carcinoma in both populations. This similarity need to be further investigated.

Medullary carcinoma of the breast diagnosed in five patients within 45 - 47 years of age range fell within the age group reported for this type of cancer (Ochicha et al., 2002). The mean age of presentation of patients with benign diseases was 29.6 ± 10.1 years was two decades less than 49.4 ± 12.3 years observed in the patients with

malignant breast disease. This is comparable to the findings of another study (Ihekwaba, 1992). The parity mean for patients with malignancy was significantly higher than those with benign disease. This also was the finding of other authors in India and Nigeria (Jagdish et al 2014; Ayoade 2012).

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

The mean duration of symptoms for patients with malignant breast disease was longer than those with benign disease. Other authors also observed long duration of symptoms and late presentation (Ihezue 1994; Yusuf 2003).

The reason for this observation could be due to insidious onset and slow course of malignant lesions.

The observation of breast cancer of 23.1% in this study closely compares with 26% reported in Zaria but however lower than a report from south west Nigeria where 35% of breast lumps were due to breast cancer. This seems to confirm that within the same geographical area there could be variation in prevalence of diseases (Yusuf, 2003) (Ihekwaba, 1992).

Conclusion

This study has shown that there are recognizable histopathological patterns of breast lump in Igbos of Nigeria. These patterns are not at variance with those of other communities in developing parts of the world.

The study shows that benign diseases are commoner in Igbo's than malignant ones and fibroadenoma is the commonest histopathological breast disease.

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