AN AUDIT OF BREAST BIOPSIES IN BABCOCK UNIVERSITY TEACHING HOSPITAL ILISHAN REMO, OGUN STATE, NIGERIA, BETWEEN JANUARY 2013 TO AUGUST 2015

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Abstract

Background: Breast cancer is one of the most important tumors affecting women in Nigeria and all over the world, with high morbidity and mortality if detection is delayed or if wrong diagnosis is made.

Objectives: This study was carried out to review the histology of all breast biopsies sent to Histopathology Laboratory in Babcock University Teaching Hospital, Ilishan, Nigeria.

Method: All breast biopsies received from January 2013 to August 2015 were analyzed. Demographic data such as age, sex, and anatomical site of the biopsy were obtained through histology request card and biopsy registers.

Result: A total of 55 breast samples were received during the period under review, 45 samples (81.8%) were benign lesions, 9 samples (16.4%) malignant lesions and 1 sample (1.8%) was an inflammatory lesion. The age group with the highest occurrence of breast pathology is 10-19 years, which are mostly benign lesions, with 30-39 years age group having the highest occurrence of malignant lesions.

Conclusion: The study indicated that most breast lesions occurring in the first three decades of life are benign, while those in the elderly are mostly malignant. We recommend strong awareness campaign to encourage early detection and appropriate management of these lesions.

Key Words: Breast Biopsies, Benign, Malignant, and Inflammatory, Nigeria.

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INTRODUCTION

Breast comprises a branching system of ducts leading down from the nipple ending in glands in which the acini aggregated into lobules. There are approximately 12 large ducts, which emerge from the breast at the nipple as lactiferous ducts. These ducts then branch repeatedly giving rise to the terminal duct lobular units (TDLUs) at the end.¹

Due to hormonal changes in female most especially from the age of adolescence to menopause, breast is often prone to a lot of structural changes leading to breast pathology. Factors ranging from genetic, viruses, endocrine, geographic, reproductive function, radiation, obesity, trauma and microorganisms have been implicated as predisposing agents of breast pathology^{2,3,4}. Breast pathology has been grouped into 3 main groups, namely inflammatory, benign and malignant lesions. Acute and chronic inflammations are the two types of inflammatory lesion seen in breast biopsies, mostly caused by either microorganisms or obstruction of lactiferous ducts⁵. Benign lesion is a non-cancerous tumor confined in one place and does not spread to other parts of the body. Benign lesions can be categorized into various fibrocystic changes that can be proliferative or non-proliferative changes, fibroadenoma, duct papilloma, phylloides tumor and others. These types of lesions commonly occur in women within the reproductive age mostly below 30 years and have fibroadenoma as the highest occurring type⁶. Malignant lesion is a cancerous condition of the breast that can invade tissues around the breast and has tendency of spreading to other parts of the body. Carcinoma of the breast can be divided according to its origin, example; ductal and lobular or according to invasiveness example; invasive and non-invasive. Carcinoma of the breast mostly occurred after 40 years of age, uncommon below 30 and rare before 25 years with invasive ductal carcinoma being the highest occurring type^{5, 7}. Palpable breast masses are common and usually benign, but efficient evaluation and prompt diagnosis are necessary to rule out malignancy. A thorough clinical breast examination, imaging, and tissue sampling are needed for a definitive

diagnosis.⁸ Breast masses have a variety of etiologies, benign and malignant. Fibroadenoma is the most common benign breast mass; invasive ductal carcinoma is the most common malignancy.⁹ Most masses are benign, but breast cancer is the most common cancer and the second leading cause of cancer deaths in women.¹⁰ However not one surgeon can stick his head out to affirm with certainty that, clinically, a breast lump is benign even if the age of the patient and features of the lump do not support malignancy.^{11, 12} The final arbiter is histological tissue diagnosis which can be achieved from tissue biopsy obtained by different techniques such as needle, core, incisional or excisional biopsies.¹³

MATERIALS AND METHODS

All breast biopsies received at the Department of Histopathology, Babcock University Teaching Hospital Ilishan, Ogun State, Nigeria between January 2013 to August 2015 will be reviewed.

The age, sex, clinical diagnosis and anatomical location of the site of biopsies will be obtained from the request cards.

The relevant slides will be retrieved from the archives of the Department of Histopathology. Where necessary new slides will be made from the formalin fixed paraffin embedded blocks and stained with hematoxylin and eosin stains.

The data obtained will be analyzed using frequency tables and charts.

RESULTS

A total of 55 breast samples representing (12.4%) of 445 samples received during the period under review. There were 45 (81.8%) benign lesions, 9 (16.4%) malignant lesions and 1 (1.8%) inflammatory lesion. All cases seen were in female.

Miscellaneous lesions include squamous papilloma in 18-year-old female, fatty change in a 50-year-old female and proliferative breast lesion with atypia in a 37-year-old woman. Twenty-seven of the breast lesions are on the left, twenty three on the right, four cases affects both sides while

five cases are of unknown side of the breast.

There was a case of inflammatory breast lesion, which is breast abscess in right breast of a fifty five year old woman. In the benign lesions fibroadenoma has the highest occurrence with 28cases (50.9%) followed by fibrocystic changes with 8cases (14.5%) then fibroadenomatoid change having 3 cases (5.5%). Invasive ductal carcinoma constitutes 14.5% having 8 cases and a case of mucinous carcinoma was seen.

Age range 10 – 19 has the highest number cases and all the cases are benign with 25 cases then followed by 20 -29 having eleven cases of benign lesions, then age range 30– 39 with four cases of benign lesions and three of malignant lesions. Age range 30 -39 has the highest number of malignant cases which is four followed by 60 -69 and 70 -79 having two cases each.

DISCUSSION

In this 32month retrospective study, a total of 55 breast samples were received during the period under review. There were 45 cases (81.8%) of benign lesions, 9 cases (16.4%) of malignant lesions and 1 case (1.8%) of inflammatory lesion. This has clearly indicated that benign lesions are the most occurrences in our society followed by malignant lesions and then less occurring inflammatory ones. This is similar to study by Mayun et.al 14, Isah et.al 15 and also that of Bafakeer et.al 16 in Southern Yemen shows similar picture with our findings. This is however different from the findings of Cheidozi et.al 17 from Northern part of Saudi Arabia with inflammatory lesions occurring more than malignant breast diseases.

Fibroadenoma is the most common benign breast lesion in this study having 28 (50.9%) out of the 55 cases seen and this is similar to the findings in other studies both in Nigeria and other countries 13, 14-17. Fibroadenoma is commoner in age group 10-19 years followed by 20-29 years having 25 cases (45%) and 11 cases (20%) respectively which is similar to the findings of Aslam et.al from Pakistan 18, however in the study by Isah RT from Sokoto the age group with the highest frequency in 20-29 years 15 and Cheidozi et al also documented a mean age of 20 years in patients with fibroadenoma.

Malignant lesion is the second commonest breast disease seen constituting 16.4% of cases with mean age of 47 years which is close to that of Ibadan that has a mean age of 48.8 13 and also that of a Ghanaian study that is 50.8 years 19. This percentage is higher than the figure from Ibadan of 10.5% 13 however in Ilorin 20 Calabar 21 and Ife 22 with 31.8%, 26.6% and 21% respectively the figures are significantly higher.

Invasive ductal carcinoma accounts for eight cases out of nine cases with a case of mucinous carcinoma seen which corroborate the findings of Seidmann H. 23. Breast cancer has been said to be exceedingly rare in females less than 30 years and this information agrees with the age-incidence of breast cancer that it increases with the age of the patient. 11, 12, 23, 24 this is in agreement in the findings in this study with no case of malignancy before the age of 30 years. Its was also discovered that as the age increases the frequency of breast cancer increased with age with all cases of breast cancer seen in ages above 60 years being cancer which is similar to the findings of Sterns EE. 26

Closely following malignant breast disease are fibrocystic changes with 8 cases (14.5%), which is close to the findings from other parts of Nigeria with 18.86% and 17.6% in series from Ibadan 13 and Sokoto 15. They were seen more in the 4th decade, which is similar to findings from Markurdi 26 and Cheidozi in Northern Saudi 17

CONCLUSION

This study shows that majority of breast diseases are benign and occur in the second decade of life with majority being fibroadenoma. It also established that malignant lesion are more in the elderly with invasive ductal carcinoma being the commonest. We also found out that breast diseases constitute 12.4% of all biopsies within this period, it therefore implies that there is need for more awareness campaign about breast diseases to enhance early diagnosis of lesions and definitive management.

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TABLES

Table 1: Showing site of occurrence of various breast lesions

Type	Right	Left
Inflammatory	0	1
Benign	16	29
Malignant	4	5
Total	20	35

Table 2: Showing Histologic diagnoses of 55 cases and their type of lesions with frequency of occurrence.

Type	Frequency	Percentage
Inflammatory	1	1.8
Fibroadenoma	28	50.9
Fibrocystic changes	8	14.5
Phyllodes	2	3.6
Sclerosing adenosis	1	1.8
Fibroadenomatoid change	3	5.5
Normal breast	1	1.8
Fat lobules	2	3.7
Invasive ductal carcinoma	8	14.5
Mucinous carcinoma	1	1.8
Total	55	100

Table 3: Showing the age incidence and breast lesions

Age range	Inflammatory	Benign	Malignant	Total
10-19		25		25
20-29		11		11
30-39		4	3	7
40-49		2	1	3
50-59	1	3		4
60-69			2	2
70-79			2	2
80-89			1	1
Total	1	45	9	55

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