
ORIGINAL ARTICLE

Comparative Study of Breast Abscesses in West Africans and West Indians

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ABSTRACT

To study the features of breast abscess in West Africans Igbos and compare with others. Abscess is a variably common lesion in the female breast. The clinicopathologic features of abscesses of the breast in West African women of the Nigerian Igbo ethnic group were reviewed and compared with the post-menopausal cases which were published concerning West Indians. Unlike a West Indian report on the unusual nature of the post-menopausal breast abscess, Igbo patients aged over 50 years, numbered up to 22.3% of the entire series of 215 cases while six patients were even in their 70s. In particular, the Igbos showed a rising trend of incidence in the 1970s, 1980s and 1990s, thus suggesting local awareness of malignancy. As breast abscess may contribute to the work load of surgeons to a variable extent in different parts of the world, its epidemiology is worth international and especially Pan African research.

Keywords: Breast abscess, West African, Igbos, lactating, non lactating

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INTRODUCTION

Elsewhere, attention was drawn to the significance of reprint requests in medical research [1]. Here, we wish to make use of one such reprint² which was received in West Africa from the West Indies because it dealt with breast abscess although of the post-menopausal type. Therefore, we wish to contribute some observations made personally on breast abscess in general from a developing community from which the West Indians mostly migrated.

METHODS

The surgical pathology records which the senior author (WIBO) kept in a Central Pathology Laboratory situated in Enugu, the capital city of the Eastern Region of Nigeria, were reviewed. All the cases which were diagnosed between 20th February 1970 and 19th February 2000 as having breast abscess were included. The patients were Igbos or Ibos, whose life patterns were studied years ago by a British anthropologist.³ They constitute a major ethnic group in Nigeria, West Africa. The relevant clinical details were extracted from the Request Forms that accompanied the surgical specimens. The pathological data were culled from the Laboratory Reports.

RESULTS

During the 30-year period, there were 215 localized breast abscesses in Igbo females.

The age range was 10-78 years (average 40.5 years). Table 1 shows the overall distribution pattern, the peak age being 31-40 years. The menopausal status was often left out, but it was mentioned in 4 patients aged below 51 years. Unlike a West Indian report on the fewness of post-menopausal abscess [2] Igbo patients aged over 50 years numbered up to 48 (22.3%) while six were even in their 70s.

The duration of breast symptoms before presentation varied from a few days to over 5 years (Table 2). It is clear that the majority of patients presented for treatment within a month of experiencing their symptoms.

The highest preoperative diagnosis was cancer in 67 (31.2%) cases. Other diagnoses were abscess, 53; fibroadenoma, 43; tumour, 21; mammary dysplasia and galactocele, 10 each; and cyst, 6 cases. Five cases were not classified.

The associated pathological conditions were almost always mammary dysplasia, to use one of the alternative names listed by Rosai [4]. None showed squamous metaplasia while 6 exhibited apocrine metaplasia. In a single patient, there was a mixed picture of mammary dysplasia and fibroadenoma. In another patient, whereas both conditions were found, abscess formation was linked only with the dysplastic area.

The parity was stated in only 93 patients. It ranged from 0 to 10 and averaged 4.8. Lactation was mentioned 32 times.

Nine unilateral specimens were not expressly classified, there being 118 left-sided and 87 right-sided lesions. A single patient had bilateral involvement.

Concerning temporal trends, the three decades of the 1970s, 1980s, and 1990s showed the respective rising figures of 12, 56 and 147.

The doctors who submitted the specimens along with the junior author (GEN) numbered 97. The highest number of specimens sent by an individual doctor was 37, the next highest being 15. Up to 68 practitioners dispatched but single specimens.

The hospitals situated in the cosmopolitan city of Enugu were the sources of as many as 118 cases (54.9%), the remaining 97 specimens coming from 33 other towns.

Table 1. Age pattern

Age group	Number
-20	9
21-30	53
31-40	64
41-50	41
51-60	30
61-70	13
71-80	5
Total	215

Table 2. Delay period in hospital presentation among 204 categorized patients.

Delay Period	Number
1 month	114
65 months	69
1 year	8
2 years	5
3 years	2
4 years +	6
Total	204

DISCUSSION

It is acknowledged that the highest incidence of breast abscess occurs in lactating women [2]. It was argued that one cause of this infection is fissuring of the nipple from which bacteria gain entry into the periglandular tissue [5], another cause being "missed or delayed feeding or attempted weaning, which leads to milk stasis and subsequent bacterial overgrowth and infection [6]." Undoubtedly, these antecedents are also prevalent in this West African community. However breast abscess is also known to occur in non-lactating women. One type of breast infection that can occur in non-lactating women is a subareolar breast abscess. A subareolar breast abscess is caused by a blocked duct or gland inside the breast. This blockage can lead to an infection under the skin. Subareolar breast abscesses usually occur in younger or middle-aged women who are not currently breastfeeding. Most commonly, they occur following breast jewelry piercings [7]. Non-lactating abscesses may be divided into central (periareolar) and peripheral breast lesions. Peripheral non-lactating breast abscesses are less common than periareolar abscesses and are often seen in older women. It is associated with an underlying condition such as

diabetes, rheumatoid arthritis, steroid treatment, granulomatous lobular mastitis, and trauma [8]. Non-puerperal abscesses typically contain mixed flora (staphylococcus, streptococcal species and anaerobes). A study by Schafer et al found a significant correlation between cigarette smoking and subareolar breast abscess [9].

Hughes [10] remarked on a recent school of thought that proposed "fibrocystic disease to be a 'non-disease.'" As he put it, "to regard it as a non entity is of little help in the clinical management of those patients who have severe symptoms." Certainly, the early presentation for treatment shown in this series demonstrates the importance and/or severity of such symptoms.

Does breast abscesses contribute to the work load of surgeons all over the world? Cox's colleagues [11] were impressed by the fact that patients with either a lump, discharge from the nipple or pain in the breast represent a considerable work load at a general surgical clinic in England. Moreover, out of 434 biopsies in a Saudi Arabian hospital, Altaf [12] saw 47 cases of breast abscess. Furthermore, from the United States, Ekland and Zeigler [13] reported on 50 patients with abscess in the non-lactating breast. In their view, incision and drainage or excision results in satisfactory resolution of the inflammation. Such satisfaction must have been felt in this developing community. However the first-line treatment for most abscesses is currently needle aspiration combined with antibiotics.¹⁴In the past, surgical treatment was the standard of care but presently, surgical treatment is typically reserved for recurrent or extremely large abscesses. Surgery may be required to remove the affected glands in order to prevent recurrence [7, 15].

In this study, Igbo patients aged over 50 years numbered up to 48 (22.3%) out of 215 patients, while six were even in their 70s. These were non-lactating abscesses. This differs from the West Indian experience, where non-lactating abscesses were few. Since Igbo women do not commonly smoke, it is likely that these women may have had diabetes mellitus or any of the conditions noted by Dixon et al [8]. Mammography is very rarely indicated or useful for breast abscess, but it is recommended to exclude the possibility of malignancy in non-puerperal abscesses, in ladies over 30 years and in puerperal abscesses with a prolonged clinical course.^{16,17} Patient with "pure" squamous cell carcinoma and ductal carcinoma with associated breast abscess have been reported, and the former is often diagnosed at an advanced stage, because it is confused with breast abscess [18].

It is well for worldwide research to be undertaken on this type of breast disease. In this context, it is interesting that in a recent Nigerian tabulation, [19] the mean age of cases of breast abscess was 39 years which is consistent with the peak age in our series being 31-40 years.

Another possible reason for attendance is awareness of breast cancer. Elsewhere, it was shown that public awareness was manifest in cases of breast fibroadenoma among teenagers in this community [20]. Although there is evidence that some Nigerian women show persistent extreme denial when suffering from breast cancer [21], the rising temporal trend evident in the present study is consistent with the prevailing enlightened awareness.

CONCLUSION

As breast abscess may contribute to the work load of surgeons to a variable extent in different parts of the world, it is worthy of international and especially Third World research.

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