BREAST CANCER SCREENING IN GHANA: IS THERE A NEED?

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SUMMARY
Seven hundred and twelve Ghanaian women aged between 20– 80 years (mean 39.9 years) were offered free physical examination of the breast. Thirteen clinically obvious breast malignancies at various clinical stages were detected - 3 out of 412 southern and 10 out of 300 northern Ghanaian women respectively. Only one was not aware of the presence of her breast lump. Six underwent excision biopsy with histological confirmation of the diagnosis. Two were advanced T4c and T4b lesions with lung metastases in one; the second refused toilet mastectomy because "it is a taboo to remove the breast". The remaining five refused biopsy confirmation because the lumps were painless and were not giving them any troubles. They would not have their breasts removed, because four considered it a taboo and one could not live with one breast. The two advanced cases were failures of herbal treatment. One had the breast lump excised but it recurred 18 months later – there was no histological examination of the specimen. On the whole nearly 40% of the study group had some abnormality with their breast. There were 53 (7.4%) fibroadenomas and 203 (28%) fibroadenosis cases.

INTRODUCTION
Screening is a way of detecting a disease early in an asymptomatic population. Its effectiveness lies not only in the availability of sensitive and specific tests, but also in the availability of treatment, which will result in an improved outcome.

Since the introduction of mammographic screening for breast cancer disease, the incidence has increased in the developed world[1] and mortality has been declining in a number of countries[2]. Whether this is due to the separate effects of improved treatment – the decrease of 12.5% mortality rate in the 50 – 69 year age group in the UK is believed to be due to the wide-spread use of adjuvant therapy[3], or earlier detection with its attendant better prognosis is still debated. However there is enough evidence of the benefits of early mammographic detection and management[4,5]. Mammographic screening is not only expensive in equipment, but also requires highly trained and committed personnel, neither of which developing nations can afford. The National Breast Screening Study (NBSS) of Canada in which women were randomly assigned to Physical Examination alone on one hand and Physical Examination plus mammography on the other, showed, after 7 years of 5 rounds of screening, virtually identical mortality results[6]. Breast cancer disease presents very late to hospitals in Accra[7] resulting in poor treatment results. This study was aimed at finding the incidence of clinically detectable breast cancer in a cross section of Ghanaian women, whether such women were aware of the presence of a lump, their attitude to the lump and whether there was need for health education and/or screening of our women folk.

MATERIAL AND METHODS
The survey was carried out in the Greater Accra and Western Regions (southern) and the Kasema Nankana District of the Upper Eastern Region (northern) of Ghana from April 1996 to August 1997.

Letters were written in advance to offices and churches in the South with a high concentration of female workers and churchgoers, for their consent to physical (routine) breast examination. They were made to complete a questionnaire seeking information about their knowledge and attitudes towards breast diseases and their management before the examination. An appeal was made through an established Medical Research Centre (Navrongo Health Research Centre) to the northern study group for the same purpose.

Those who were detected to have clinically malignant breast lumps were offered excision biopsy (only method available) for confirmation of the diagnosis and then treated accordingly after obtaining informed consent. Some refused treatment.

RESULTS

Seven hundred and twelve women aged between 20–80 years (mean 39.9 years) were examined. Four hundred and twelve were from the south and three hundred from the north. Thirteen cases of clinically obvious breast cancers aged between 32 and 60 years (mean 44.8 years) were detected. Three of these were from the 412 southern and ten were from the 300 northern study groups respectively. All three southerners had secondary school education. None of the northerners had any formal classroom education.

Table 1: Patient Characteristic, Conception, Attitude and Acceptance of Treatment for Breast Cancer Disease

Age	Duration of Lump	Clinical Stage	Conception of Lump	Treatment Received	Diagnostic Procedure	Treatment Offered	Patients' Response
SOUTHERN WOMEN							
54	Not aware	T2NoMx	Does not Know	None	Excision Biopsy-IDC Cribriform and comedo type No nodes involved	TM + AC Adjuvant Chemotherpy	Accepted
40	Not sure of duration but aware	T2N1Mx	Does Not Know	None	Excision Biopsy-ILC Nodes Involved	TM + AC oophorectomy Adjuvant Chemotherapy	Accepted
42	2 weeks	T2N1Mx	Suspected Cancer	None	Excision Biopsy-IDC Nodes involved. Left Breast Diffuse mammographic calcification	TM + AC Bilateral Oophorectomy + Adjuvant Chemotherapy TM + AC No Nodes involved	Accepted
NORTHERN WOMEN							
39	3 years	T4bN2Mx	A boil that will revolve	Herbal – Ulceration	None	Toilet mastectomy	Refused - a taboo
55	2 years	T4cN2M1	Initially painless giving no troubles	Herbal -	Requested Surgery	Inoperable – lung Secondaries	Requested Surgery
60	2 years	T3N1Mx	Abnormal Lump	Excised but recurred (no histology)	Wide excision – IDC	TM +AC Adjuvant Chemotherapy	Accepted but could not afford
40	6 months	T2NoMx	Painless lump (no troubles)	None	Excision Biopsy- IDC	TM + AC	Accepted
45	6 months	T2NoMx	Painless lump (asymptomatic	None	Excision Biopsy	-	Refused – a taboo
47	3 months	T2NoMx	Painless boil	None	Excision Biopsy	-	Refused – a taboo
47	3 months	T2N1Mx	Painless lump	None	Excision Biopsy	-	Refused – a taboo
32	3 weeks	T2NoMx	Just a swelling giving no troubles	None	Excision Biopsy cut surface –yellowish-grey	TM + AC	Accepted
40	2 weeks	T2NoMx	Swelling giving no trouble	None	Excision Biopsy	-	Refused cannot live with one Breast
41	5 months	T2NoMx	Painless swelling giving no troubles	None	Excision Biopsy	-	Refused – a taboo

**TM = total mastectomy*
** AC = axillary clearance*
** IDC = infiltrative ductal carcinoma*
** ILC = infiltrative lobular carcinoma*

One woman had no child but the others had between 1 and 9 children, with a mean of 4.8 children. The age at first full term pregnancy ranged from 16 to 25 years (mean 18.75 years). Five were postmenopausal and one had had her uterus removed on account of bleeding uterine fibroids at the age 35.

All the thirteen women would submit to breast examination if they had obvious problems with their breast. Three would not ordinarily allow the breast to be seen on religious grounds (Moslem Religion). Two believed that the seeing of one's breast by others would result in breast disease and two were too shy to allow a non-spouse to see the breast. The rest did not mind their breast being seen by others. Of the study group of 712 women, 67 (9.4%) would refuse breast examination by a non spouse for whatever reason.

All the three southerners with clinical breast cancer had the diagnosis confirmed histologically and appropriate treatment initiated. (Table I). Five northerners refused surgery for various reasons (Table I) and declined even excision biopsy for histological confirmation. Two cases were very advanced – one was inoperable with bilateral pleural effusion and cannon ball metastases in the lung, the other who would have benefited from toilet mastectomy declined operation because "it is a taboo" in her community. Three had excision biopsies, two of which were invasive ductal carcinomas. The third specimen got lost in transit but the cut surface was yellowish-grey with a gritty feel.

All three southern patients had a close relation who has had Breast Cancer disease (two of them had sisters and one had maternal grandmother with the disease).

There were 69 well-defined fibroadenomata in 53 women. Twelve of these were associated with fibroadenosis. Only 25 (2 northerners and 23 southerners) of these had histological confirmation. Two hundred and three women had pain associated with general lumpiness of the breast (fibroadenosis), all of whom were premenopausal. Eight breast abscesses in lactating women were recorded. (Table 2).

Table 2: Distribution of Clinical Breast Lesions in the Study Group

CLINICAL DIAGNOSIS	NUMBER
Fibroadenosis	203 (28%)
Fibroadenoma	53 (7.4%)
Breast Abscess	8 (1.1%)
Breast Cancer	13 (1.8%)
No Abnormality Detected	435 (61.1%)

Percentages in brackets

DISCUSSION

There are very good reasons for early detection of breast cancer disease before it becomes symptomatic. It results in a high rate of non-infiltrating (in situ) carcinoma and even when infiltrative, the lesions are usually well differentiated and therefore biologically less aggressive. Surgery in these cases may be less invasive i.e. breast conservation is possible with consequent reduced psychological trauma.

It is significant that of the thirteen patients with breast cancer, only one was not aware of her breast disease and only three sought "health advice". Two saw herbalists when the diseases were well advanced. The only one who saw a doctor was mismanaged. To most of them it was a "painless well behaved" lump and therefore needed no disturbance. Until the significance of a breast lump dawns on our female population, many would seek advice only when it has ulcerated, or there is distant spread as seen in this study. Even with the knowledge of what the lump could be, the majority of the detected breast cancer patients from the northern region refused treatment because of their social beliefs and cultural practices. If treatment of the obvious breast tumour is declined (Table I) there is no guarantee that a woman would submit to mastectomy simply on account of localised or diffuse microcalcification in the breast. Clearly, mammographic screening is not indicated in that community at this point in time. Health education should rather be encouraged. The three women submitting to appropriate management Table 1) had education on their side which might have influenced their decision because of better knowledge about the disease. What is more, a first degree relation of theirs had died or suffers from the disease. Such a family history significantly increases the risk of developing breast cancer. Factors that point to the possibility of breast cancer being hereditary are early onset (<35 years), bilateral disease, several affected family members and association of breast cancer disease with uterine and ovarian tumours[8]. A case can be made for members of such families to have mammographic screening.

Thirteen breast cancers were detected in the 712 women with a mean age of 39.9 years. This suggests that breast cancer may be commoner in the Ghanaian woman than generally thought. Figures collected from the Korle-Bu Teaching Hospital from 1993 – 1998 (yet to be published) indicated that breast cancer incidence peaks at the 35 to 55 age group (37.9% for age group 36 – 45 and 23.4% for 46 – 55 age group). Quartey-Papafio et al reported the peak at the age group 40 – 49 (29.2%)[9]. If the right age group had been surveyed in this study a lot more cases would have been detected.

The shortcoming of this study was the inability to confirm the diagnosis in those women with definite breast lump, especially those that were clinically adjudged malignant.

From this study nearly 40% of Ghanaian women have a pathology of some sort in their breast. This would suggest that routine breast examination should be offered to all women attending outpatient clinics. That way malignant breast lesion may be detected early with consequent improvement in patient survival.

CONCLUSION

Breast cancer disease is not uncommon in the Ghanaian woman. Although the number studied is small 13 discovered cases out of 712 unselected women suggest that the disease is commoner than people think. The late presentation and therefore poor prognosis is the result of ignorance. There is a need to educate women on breast cancer and its presentation if mortality from the disease is to be reduced. Mammographic screening is not the solution now although a case can be made for the 'at risk' group.

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