Delay between Breast Cancer Detection and Arrival at Specialist Clinic Preliminary Revelations of Multicentered Survey in Nigeria

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Abstract

Delay between breast cancer detection and arrival at specialist clinic. Preliminary revelations of multicenter survey in Nigeria

Background: Level of breast cancer awareness and rate of late presentation usually have inverse relationship. The parallel relationship witnessed in Nigeria is a paradox requiring urgent intervention.

Aim: To understand the paradox, we described the patient's journey from lump detection to arrival at the specialist clinic. Barring awareness, identifying where the major delays still resided will help to re-direct our strategies in the control of breast cancer scourge.

Method: Cross-sectional multicenter questionnaire based survey conducted in surgery outpatient clinics of 10 tertiary institutions in North central and Southwestern Nigeria. Face-to-face interview was conducted using pretested questionnaire. Data was analyzed using SPSS, version 18. p-value was set at 0.05.

Results: One hundred newly diagnosed women responded in this preliminary analysis. Age ranged 26-80 years (mean 50.5± 13.2). Eighty-one (81%) were aware of breast cancer before detecting their lump(s). Eighty-eight (88%) had lumps ≤5cm at detection. Sixty-nine (69%) (p= 0.0001) visited the first orthodox personnel when their lumps were ≤5cm. Only 39(39%) arrived at specialist clinic when their lumps were ≤5cm. Ninety-five respondents (95%) (p=0.0001) visited orthodox personnel first to seek treatment. The first personnel was general practitioner 72% of the times (p=0.0001) (see figure 2). Fifty-eight (58%) consulted the first orthodox personnel within 8 weeks (p=0.133). Only 26% arrived at a specialist clinic within 8 weeks (p=0.0001). Mean interval from detection to first personnel was shorter (61 days) than mean interval between first personnel and specialist clinic (157 days) (P=0.0001)

Conclusion: The longest stretch of journey was between the first orthodox consultation and the specialist clinic.

Keywords: breast cancer, detection, Journey to specialist clinic.

Background

Breast cancer patients continue to arrive late to specialist clinic in Nigeria despite increasing awareness. The relationship between level of awareness and rate of late presentation should be inverse, the parallel relationship witnessed in Nigeria is paradoxical and it suggests a deficiency which requires urgent intervention.

Poor outcome of breast cancer management in Nigeria and low-income countries in general is linked to delays along the continuum of detection to treatment. In Nigeria, the bedrock of the fight against breast cancer has been to increase awareness. Therefore, enormous effort and millions of naira is expended on campaigns, awareness boosting programs and provision of screening facilities by the Government, indigenous and international Non-Governmental Organizations. Despite reports of increasing levels of awareness(1-8) our specialist clinics continue to receive breast cancer patients at late stages when treatment is least effective and least rewarding(9, 10).

In our quest to understand the existing paradox, we undertook this research among breast cancer patients to describe the journey from lump detection to arrival at the specialist clinic. Barring awareness, we hoped to identify where the major delays still resided. This information will help to re-direct our strategies in the control of breast cancer scourge.

Based on a pilot study where we found that 80% of patients presented to the first orthodox medical personnel within 30 days of detecting their breast lumps, we postulated that majority of the delay was after first contact with orthodox personnel. This is a report of our preliminary analysis.

Method

This was a cross-sectional study on breast cancer patients in Surgical Outpatient clinics of 10 tertiary health institutions in North central and Southwestern Nigeria. It was a semi-structured questionnaire-based design. After ethical approval, face-to-face interview was conducted using a specially designed and pretested questionnaire. We requested information on patients' socio-demography, chronology of events relating to detection, disclosure and contact with orthodox personnel for care. All newly diagnosed patients above 18 years were included. Language barrier, mental incapacitation and recurrent lumps were reasons for exclusion.

Hypothesis and sample size determination

From our pilot study 80% of patients had tumors estimated to be less than 5cm at first orthodox contact and 80% made the first orthodox contact within 30 days of detection of lesions. We hypothesized that among breast cancer patients who presented to outpatient specialist surgical/breast clinic for the first time, 1) majority visited orthodox personnel before traditional, 2) majority presented to the first orthodox personnel within 8weeks of noticing their breast lumps and 3) majority presented to the first orthodox personnel when their lumps were estimated to be ≤5cm diameter. Using the sample size calculation for descriptive cross-sectional study at a relative precision of 5% and confidence level of 95% (1.96), the minimum sample size required to test our hypothesis was 384 respondents. Considering a nonresponse rate of 10%, we required a maximum of 423 respondents. Data was analyzed using SPSS, version 18. p-value was set at 0.05.

In this preliminary report, we analyzed response from the first 100 patients. At the time of this report, there was no well-structured system of care and referral for breast cancer patient in Nigeria. Consequently, majority of patients expected to receive adequate care from whichever health personnel they have always entrusted with their health. The data in this report was interpreted based on this premise.

Results

All 100 respondents were females, the age range was 26-80 years (mean 50.5± 13.2). Fifty (50%) were postmenopausal. Eighty-one (81%) were aware of breast cancer before detecting their lumps.

Estimated size at lump detection

Among the 100 respondents, 88 (88%) estimated their lumps to be ≤5cm at detection. Sixty-nine (69%) (p= 0.0001) visited the first orthodox personnel when their lumps were estimated to be ≤5cm and 39(39%) visited the first specialist clinic when their lumps were estimated to be ≤5cm.

Journey of disclosure

Fifty-seven (57%) informed someone about their lumps within 1week, 65(65%) informed someone within 2weeks and 81% informed someone within 4 weeks. The first person informed was the husband 50% of the times (see figure 1). The first person advised visiting a doctor, nurse or hospital 75% of the

times (see table 1). Seventy-three (73%) of respondents acted on the advice given by the first person within 2weeks.
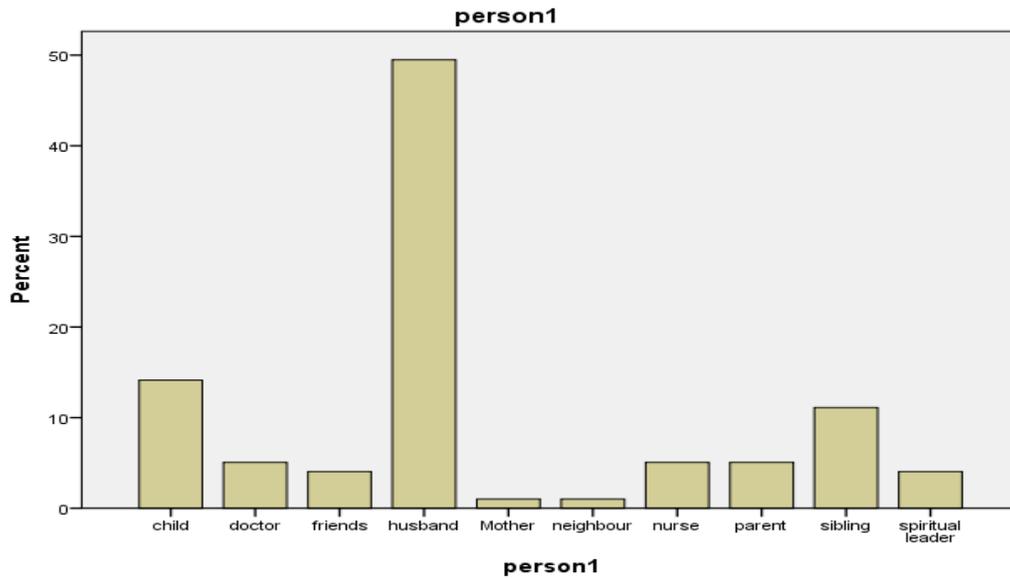
Figure1. First person informed

Advice offered by first person informed table1

Advice offered	Frequency (%)
Go Hospital/consult Doctor/Consult Nurse	75 (75)
Observe/ reassured	13(13)
Consult spiritual leader/ Pray and fast	9(9)
Use antibiotics/apply hot forment	3(3)

Journey to specialist

Ninety-five respondents (95%) (p=0.0001) visited orthodox personnel first to seek treatment, 5 percent visited traditionalist or a religious leader first. The firsts orthodox personnel was general practitioner or family physician 72% of the times (p=0.0001) (see figure 2). Forty percent consulted the first orthodox personnel within 2weeks, 54 percent within 4 weeks and 58% within 8 weeks (p=0.133). Seven percent arrived at a specialist clinic within 2weeks, 14 % arrived at a specialist clinic within 4 weeks and 26% arrived at a specialist clinic within 8 weeks (p=0.0001). The mean interval from detection to first orthodox personnel was 61 days, while the mean interval between first orthodox personnel and first specialist clinic was 157 days (see table2) (P=0.0001)
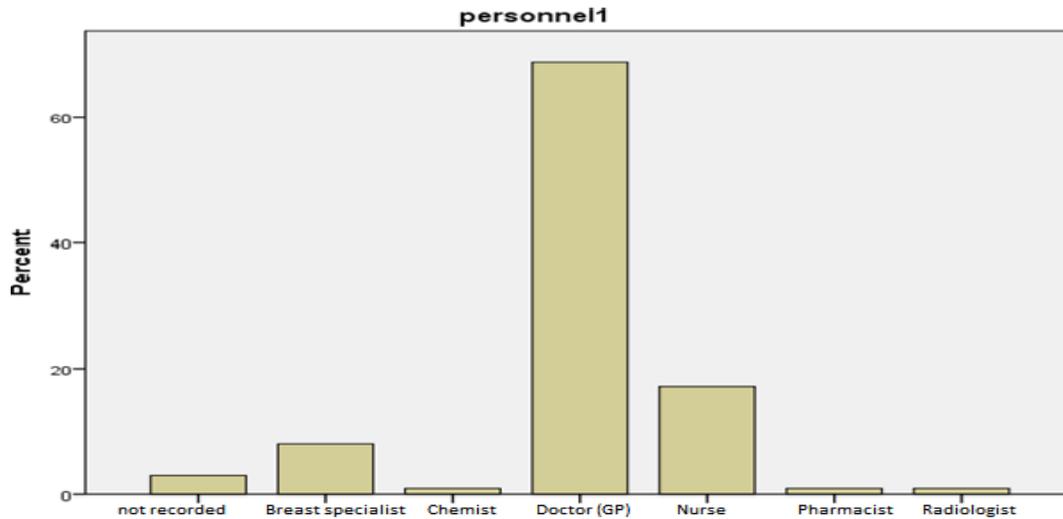
Figure 2. First orthodox personnel consulted

Table 2. Comparison of intervals

Interval in days	Mean	P value= 0.0001
Interval between detection and getting to first orthodox	60.3 ±67	
Interval between first orthodox and getting to specialist clinic	157 ±202	

(Confidence Interval: 49.2 days, 144days)

Discussion

Breast cancer patients continue to arrive late at specialist clinics in Nigeria and many low and middle-income countries. A report among Libyan women found median delay of 4 months between lump detection and arrival at orthodox medical consultation. Another study in Malaysia found that only about a third of women sought orthodox consultation within one month of finding their lump(s) (11, 12). Late arrival escalates the overall burden of treatment; it necessitates unwanted mutilating surgeries and thus worsens the physical, and psychological implications. It multiplies the monetary cost of treatment and at the same time lowers chances of survival.

Poor awareness has been the focus for control of breast cancer in Nigeria for more than 2 decades now. However, recent reports are suggesting the probable need to review our strategy in favor of other competing factors such as patient adherence and navigation (8, 13-15). In response to this suspected change in trend, our study was directed at describing the journey of a breast cancer patient from lump detection to arrival at a specialist clinic.

Data from a hundred respondents constituting a quarter of the planned overall sample size were analyzed in this report. Majority of the respondents were aware of breast cancer before noticing their lump(s), this conformed with recent reports and a systematic review showing that majority of respondents in Nigeria were aware of breast cancer(8). The weighted average level of awareness according to the systematic review was 80.7%.

Estimated size at lump detection

Close to 90% of respondents in this study had lumps estimated to be ≤5cm at detection, this fraction reduced by 22% before visiting the first orthodox personnel and by 55% before arrival at first specialist clinic. This meant that while majority found their lumps at sizes less than 5cm, most lump had grown to sizes above 5cm diameter at first consultation in the specialist clinic. The reduction in fraction was larger between first orthodox consultation and specialist clinic than between detection and first orthodox

consultation. The specialist clinic is where the diagnosis is made, record of orthodox visit is kept and research reports commonly emanate. The study among Libyan women showed a reverse trend where time to diagnosis was shorter after first orthodox consultation than the time between detection and first orthodox consultation (12). The Libyan study however did not state whether the orthodox consultation was specialist clinic.

Journey of disclosure

Most patients informed someone about their lump(s) within 4 weeks, majority did so within 1 week of noticing their lump(s). Comfortingly, two-thirds of the informed persons offered adequate advice and majority of patients acted on the advice given by the person informed. The husband was the first to be informed in most cases.

The husband's angle is a newly revealed significant gap in our strategy against breast cancer. This gap has not been adequately employed. It is rare to find research on breast cancer targeting husbands/men from Nigeria. Only one of such studies was found, it was the report of a research by Adeoti et al seeking the opinion of men about assisting to detect lumps in their spouse's breast(16). Among 51 studies reviewed by Agodirin et al in their systematic review dwelling on the levels of awareness of breast cancer in Nigeria, only 2 included males and among close to 20,000 respondents only 316 were males(8).

Journey to specialist

In this study, 95% of respondents (95%) (p=0.0001) visited orthodox personnel first to seek treatment and the first orthodox personnel was a general practitioner on most occasions. Even though the numerical value (57%) was in favor of majority visiting the personnel within 8weeks, it was not statistically significant (p = 0.133). There was however a marked reduction in the fraction arriving in the specialist clinic within 2, 4 and 8 weeks (p=0.0001). Also, the mean interval from detection to first orthodox personnel (61 days) was significantly different from the mean interval between first orthodox personnel and first specialist clinic (157 days) (see table).

Conclusion

While we await the final report, this preliminary review showed that majority of breast cancer patients found their lumps when they were relatively early. Majority of breast cancer patient presented to orthodox medical personnel first. The narrowest bottleneck in the journey of the breast cancer from detection to specialist was between the first orthodox consultation and the specialist clinic.

While we continue to raise awareness, to draw attention to the bottleneck between first orthodox consultation and specialist clinic where research reports commonly emanate, we recommend that the term "late presentation" which targets the interval between lump detection and orthodox consultation be extend and rephrased as "late presentation to specialist clinic" or "late representation to orthodox care.

Based on this preliminary review our strategy should be at least two-pronged; we target the interval between detection and first orthodox caregiver and we the interval between the first orthodox caregiver and the specialist.

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