DURATION BEFORE PRESENTATION FOR BREAST CANCER PATIENTS IN A LOW RESOURCE ENVIRONMENT

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Abstract: **Introduction: Breast cancer is the most commonly diagnosed cancer among women and the leading cause of cancer death. Breast cancer in Nigeria and other developing countries is characterized by late presentation and poor outcome mostly due to ignorance, superstition, self-denial, fear of mastectomy and unavailability of treatment facilities.**

Objective: The aim of this study is to assess the duration of symptom of breast disease before presentation to the hospital and to correlate the duration with tumour stage.

Methodology: This is a prospective study carried out at the Chukwuemeka Odumegwu Ojukwu University Teaching Hospital (COOUTH), Amaku-Awka. The study span from January, 2021 to December, 2023. All pre-menopausal patients presenting with histologically confirmed breast cancer who have not received any form of intervention were recruited into the study. The patients were all evaluated clinically and data recorded in the study proforma.

Results: A total of 147 female patients were recruited. The age of the study population ranged from 24 to 54 years with a mean of 40.92±7.98 years. The duration of breast lump before presentation range from 1-36 months with a mean duration of 10.02±8.06. 39(26.5%) out the total presented within five months of noticing a lump in their breast and 36 patients out the 39 have breast masses within 10cm in size. 108 (73.5%) patients presented six months and above after noticing a lump with 51 of them presenting with breast masses greater 10cm in widest diameter. The size of the breast masses and the duration showed a positive correlation, Pearson's correlation +0.575 (0.00).

Conclusion: The study shows that majority of the breast cancer patients in our environment present more than 6 months after noticing their symptoms and this correlates with the size of the tumour at presentation.

Keywords: **Breast cancer, Presentation, Duration.**

1. INTRODUCTION

The commonest malignancy affecting women in many parts of the world is breast cancer, with an estimated 2.1 million new patients diagnosed in 2018 worldwide.[1] Breast carcinoma is the commonest diagnosed cancer among women and the leading cause of cancer death.[1] Locally advanced and metastatic breast cancer with the attendant morbidity and mortality have remained a significant challenge in developing countries mainly due to delay in presentation, ignorance, cultural beliefs, poor or absent cancer registries, lack of proper management protocol and inefficient healthcare systems.[2-5] The mortality of breast cancer in the western world on the other hand is decreasing due to early detection and better management resulting from better resources, improved education and increased use of screening mammography.[2,6,7]

The incidence of breast cancer in sub-saharan Africans has been increasing with majority presenting at advanced stages.[2-9] Anyanwu[4] in a 10-year prospective study found that patients with breast cancer make up 30% of patients with breast disease; while Oluwole et al[10] reported 21%. Breast cancer in Nigerian and African women is characterized by young age at presentation.[11,12] They present approximately a decade earlier than patients in western countries.[2-10] The aim of this study is to assess the duration of symptom of breast disease before presentation to the hospital and to correlate the duration with tumour stage.

2. METHODOLOGY

This is a 3 year prospective study carried out at the Chukwuemeka Odumegwu Ojukwu University Teaching Hospital (COOUTH), Amaku-Awka. Chukwuemeka Odumegwu Ojukwu University Teaching Hospital is a tertiary institution located in Awka, the State capital of Anambra State, South-Eastern Nigeria. The study span from January, 2021 to December, 2023. All pre-menopausal patients presenting with histologically confirmed breast cancer who have not received any form of intervention were recruited into the study. The patients were all evaluated clinically and data recorded in the study proforma. Ethical approval was sort and obtained from the Ethical committee of the Teaching Hospital before the commencement of the study. The data were analyzed using the SPSS statistical software version 23.0. (Statistical Package for Social Sciences SPSS Inc.).

3. RESULTS

The age of the study population ranged from 24 to 54 years with a mean of 40.92 ± 7.98 years. The age group distribution of the patients is as shown in table 1. Three (2%) of the patients were within 20-25 years age group; 15 (10.2%) within 26-30 years; 27 (18.4%) within 31-35 years; 24 (16.3%) within 36-40 years; 21 (14.3%) within 41-45 years; 42 (28.6%) within 46-50 years and 15 (10.2%) within the 51-55 years age group (Table 1).

Table 1: Age group frequency distribution.

Age group	Frequency	Percent Frequency	Cumulative Frequency
20-25	3	2.0	2.0
26-30	15	10.2	12.2
31-35	27	18.4	30.6
36-40	24	16.3	46.9
41-45	21	14.3	61.2
46-50	42	28.6	89.8
51-55	15	10.2	100.0
Total	147	100	

39(26.5%) out the total presented within five months of noticing a lump in their breast and 36 patients out the 39 have breast masses within 10cm in size. 108 (73.5%) patients presented six months and above after noticing a lump with 51 of them presenting with breast masses greater 10cm in widest diameter (Table 2). The size of the breast masses and the duration showed a positive correlation, Pearson's correlation +0.575 (0.00).

Table 2: Cross-tabulation of size grouping of breast masses and duration before presentation.

Size grouping * Duration grouping Crosstabulation

| Size grouping(cm) | Duration grouping(months) | | | | | | Total |
	0-5	6-10	11-15	16-20	21-25	>25	
0-5	12	6	3	0	0	0	21
6-10	24	36	9	0	3	0	72
11-15	3	18	6	6	6	6	45
16-20	0	0	6	0	0	0	6
>20	0	0	0	0	3	0	3
Total	39	60	24	6	12	6	147

4. DISCUSSION

The age of the patients in the current study ranged between 24-54 years with a mean of 40.92±7.98 years. This correlates with a mean of 42.1 years and an age range of 26 to 51 years as documented in a similar study at Nnewi.[13] This is also similar to a mean of 42.8 years and a range of 30-49 years recorded by Anyanwu et al.[14] The similarity of the current study to these two studies is most likely because all the studies were done on premenopausal women. Other studies, including the one done in Shiraz, Iran, noted a mean age of 41.0±8.61 years.[15] The above findings differ from what was documented by Olatoke et al.[16] who recorded an age mean of 47.9±13.1 years with a range of 28-85 years. This difference is obviously due to the inclusion of both pre-and post-menopausal women in their study. The peak age group for the current study was noted in the fifth decade (Table 1). This peak age corresponds with 40-49 years peak incidence documented by a study in Lagos state, although the survey also included post-menopausal women.[17]

Before presentation, the duration of breast lump in this study ranged from one month to 36 months with a mean of 10.02±8.06 months. This shows a general delay in the presentation, which correlates with the findings in other studies done in the sub-Saharan Africa.[2,17-20] Majority of the patients, 108 (73.5%) presented six months and above after noticing a lump in their breasts (Table 2). Egwuonwu, in a study at Nnewi, noted a range in the presentation of 3 weeks to 108 months and a mean of 19.9 months was observed.[21] Anyanwu recorded a delay in presentation ranging from 2 weeks to 9 years.[2] Adesunkanmi et al., in their own study, documented a mean duration of 11.2 months with a range of 9 days to 7 years.[22] Ibrahim et al. in Lagos recorded a range of 3 weeks to 6.5 years and a mean of 46.48±51.97 weeks.[17] Clegg-Lamptey et al. in Ghana noted that their patients presented on the average 10 months after noticing symptoms with a range from 2 weeks to 5 years.[19] Okobia et al. in Benin stated that 78% of their patients reported after 3 months of symptoms.[20] In all the above studies, there was a general delay in presentation which most likely will impact on the stage of the disease at the presentation. In the current study, the size of the breast masses and the duration showed a positive correlation, Pearson's correlation +0.575 (p<0.00). This agrees with the above assertion that the time of presentation impacts on the stage of breast disease.

5. CONCLUSION

The study shows that majority of the breast cancer patients in our environment present more than 6 months after noticing their symptoms and this correlates with the size of the tumour at presentation.

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