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Trend, Treatment Outcome and Associated Factors of Breast Cancer at TGSH and FHRH, West Amhara, Ethiopia from January 2018 to December 2022: Institution-based Retrospective Study

Assefa Sisay Ayenew[1*], Alemtsehay Mekonnen[2], Nebiat Embiale[3]

[1]*Department of Surgery, Dessie Comprehensive Specialized Hospital, Dessie, Ethiopia*

[2]*Department of Reproductive Health, Bahir Dar University, Bahir Dar, Ethiopia*

[3]*Department of General Surgery, Bahir Dar University, Bahir Dar, Ethiopia*

ABSTRACT

Background: Breast cancer is a leading cause of death worldwide and ranks the 5th cause of death among all cancers and most common cause of cancer death in women both developing and developed countries.

Purpose: This study assessed the trend, treatment outcomes and associated factors of breast cancer at the TGSH and FHRH from January 1, 2018, to December 30, 2022.

Methods: An institution-based retrospective study was conducted from January 1, 2018, to December 30, 2022, at TGSH and FHRH, Bahir Dar. Secondary data were collected by reviewing patients' charts. The collected data were entered into EPI data and exported to SPSS for further analyses. Univariate logistic regression analysis was performed to identify associated factors. Variables with a P-value ≤ 0.25 in binary logistic regression analysis were candidates for multi-variable analysis. Statistical significance was set at $p<0.05$. AOR with 95% CI was used to measure the strength of association.

Results: Among the 132 patients, 90.2% were females. The median age and mean symptom duration were 38 years and 7.87 months respectively. Only 75.3% of patients presented with breast lumps. One patient had bilateral breast cancers. Most patients present late with a locally advanced stage. The predominant histological finding was ductal carcinoma (53.0%). NACT was administered to only 6 (4.5%) patients. During follow-up, 34.1% and 3.8% of the patients developed local wound complications and recurrences, respectively. Only one patient was referred for radiotherapy. Presenting symptoms and waiting time for surgery were significantly associated with short-term complications (AOR=0.28; 95% CI (0.09, 0.93)) and (AOR=0.16; 95% CI (0.03, 0.89)) respectively. In multivariable models, performing surgery within 10 days of diagnosis decreased the incidence of short-term complications.

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Corresponding author: Assefa Sisay Ayenew, Department of Surgery, Dessie Comprehensive Specialized Hospital, Dessie, Ethiopia; E-mail: asbsisay4@gmail.com

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Conclusion: Our study showed that relatively young females are commonly affected, the majority presenting with locally advanced stage of the disease.

Keywords: Breast cancer; Treatment outcome; Recurrence; Ethiopia

INTRODUCTION

Cancer is one of the major non-communicable diseases responsible for 13% of total annual deaths worldwide [1]. Breast cancer is the 5th leading cause of death worldwide among all cancers and is the most common cause of cancer death in women in both developing and developed countries. The prevalence of breast cancer in Ethiopia accounts for 25%-34% of all female cancer cases, followed by cervical and colorectal cancer [1-3]. Male breast cancer is a rare disease representing, 1% of all breast carcinomas.

The lifetime risk of breast cancer is about 0.1% for a man, whereas it is 12% for a woman [4,5]. Breast cancer incidence rates rise steadily with age; the average age of a new breast cancer diagnosis is five years older for men (67 years) than for women (62 years). Breast cancer has geographic variations in presentation and the reasons for this disparity, however, are not as obvious and are likely to be multifactorial [3]. Risk factors such as sex, obesity, lack of physical exercise, alcohol consumption, hormone therapy during menopause, ionizing radiation, age at first menstruation and old age affect the incidence of breast cancer [3,6]. Other risk factors for male breast cancer include a family history of breast cancer; black ethnicity; exposure to radiation to the breast or chest; carrying a predisposition germline genetic mutation [7].

Approximately two-thirds of women with breast cancer in Addis Ababa are diagnosed with advanced-stage disease. This is strongly associated with the use of traditional medicine and the prolonged interval between symptom recognition and disease confirmation. Survival after the diagnosis of breast cancer is poor in Ethiopia because of the late stage at diagnosis and limited access to standard treatments [6,8]. Approximately 85% of the cases were diagnosed at stages III and IV. The predominant histological finding was ductal carcinoma and 37% of the patients had moderately differentiated tumors [9,10]. The incidence of ipsilateral supraclavicular Lymph Node (LN) metastasis without distant spread at the time of diagnosis is low (1%-4%). Hormone receptor positive tumors are the most common molecular subtype of breast cancer in Ethiopia and other East African countries. Triple-negative breast cancer accounts for 23% of all cases [3]. Another study in Nigeria demonstrated that the predominant pattern of immunohistochemistry study was estrogen positive tumor in 61.9% and triple negativity in 28.3% of breast cancer patients [11].

Breast cancer death could be reduced if appropriate treatment is provided for the patients and detection is made earlier; however, old age remains a risk factor for poorer survival [3]. The practice of BSE is very low in Ethiopia. 15 to 32.4% of the study population practiced BSE and only 26% had good knowledge of breast cancer [12,13]. Meanwhile, 54.1% of the undergraduate female students knew and did BSE. The overall knowledge of women with breast cancer, family history of breast cancer, marital status and occupation were significantly associated with BSE [14]. Breast cancer screening and early detection are key strategies for reducing breast cancer-related mortality and distant complications and signifying a better outcome [13]. Most guidelines recommend screening after 50 years of age [7].

In the 19th century, most surgeons treated breast cancers with limited resections, with local recurrence as the rule. However, it was not until 1894 that William Stewart Halsted proposed radical mastectomy as the treatment of choice for breast cancers of any type and size [15]. A study conducted in Gondar showed that 65.7% of the patients had a positive surgical margin [9]. An early breast cancer is potentially curable. In the last decade, despite its increasing incidence, breast cancer mortality has been declining in the majority of developed countries. Neoadjuvant systemic treatment has emerged as a standard of care for treatment situations in which primary breast conservation is not possible because of tumor size or the association of tumor and breast size, provided that the patient has an indication for chemotherapy [16]. Endocrine mani-pulation with tamoxifen, ovarian ablation or both, is the preferred option for endocrine-responsive tumors [17]. Tamoxifen plus ovarian ablation was more effective than tamoxifen alone in premenopausal women. CHT is the treatment of choice for steroid receptor-negative tumors [4].

The incidence of seromas after mastectomy ranges from 3%-85%. Flap fixation after mastectomy leads to fewer seroma aspirations than does conventional wound closure [18]. Another meta-analysis study on flap fixation after mastectomy found that 22.41% of patients experienced seroma formation after flap fixation and 43.61% of patients developed this complication without flap fixation [19]. Reducing dead spaces, leaving suction drain reduces the rate seroma formation. Flap fixations had no significant negative effect on surgical-site infections. SSI was observed in 59/686 (8.6%) patients in the flap fixation group and 67/686 (9.7%) in patients without flap fixation. BMI, the presence or absence of comorbidities, preoperative CHT and surgical factors did not affect the occurrence of skin flap necrosis. Approximately 38.7% of patients developed post-taxane-based therapy metastases and were followed up for 2 years. Of these patients, 51.3% developed metastases within 10-12 months. Ipsilateral axillary nodes were the most common locoregional sites (27.5%). ER negative patients had 2 times higher risk of recurrence than ER positive patients and those with poorly differentiated histologic tumor had almost 3 times higher risk of recurrence than histologic grade I. Similarly, positive LN status, clinical stage III and deeply involved surgical margin were significantly associated with recurrence. Overall, the

breast cancer treatment outcomes were poor in the TASH study. Age, clinical stage (late stage), type of CHT, number of CHT cycles, mode of treatment and endocrine therapy were found to be the determinants of death.

MATERIALS AND METHODS

A retrospective medical record review was performed by physicians and nurses working in the two hospitals. The sample size was estimated based on previous studies using the same setup. All breast cancer patients surgically treated at TGSH and FHRH from January 1, 2018, to December 30, 2022, were the source population. The medical records of patients who were referred from other hospitals after surgery and patients with unknown discharge status during the study period were excluded. First, we retrieved the medical records of all patients with breast cancer from the cancer center, surgical ward and operating theater. Second, we reviewed the records and identified variables that could be extracted from them. Completeness of the recorded data was ascertained by the primary investigator. Breast cancer treatment outcome: Short-term local complications were the dependent variables. The independent variables were socio-demographic, hormonal factors, patient and clinical related and treatment-related variables. The collected data were coded and entered into EPI data 3.1 software. It was cleaned, edited and exported into SPSS version 26 for further analysis and checked for missing values before analysis. Descriptive statistics were used to summarize the data in the form of mean frequency, Standard Deviation (SD) and cross-tabulation. Binary logistic regression analyses were performed to identify the association between short-term complications and independent variables. Variables associated with bivariate logistic regression with a significance level (p value ≤ 0.25) were entered into multiple logistic regressions to identify important determinants by controlling for possible confounding effects. Statistical significance was declared at a p-value ≤ 0.05 and the predictors of outcome variables were identified accordingly. AOR with 95% CI was used to describe the association. This study was conducted in accordance with the ethical guidelines of both institutions.

RESULTS

Socio-Demographic Characteristics of Breast Cancer

Of the 138 patient charts included in this study, 132 questionnaires were ready for final data analysis, resulting in a response rate of 95.65%. Among the 132 patients, 119 (90.2%) were female. Approximately 4/13 (30.7%) of the male patients who underwent surgery for breast cancer were aged 61-70 years. The participants were aged 25-76 years with a mean age of 41.95 years and SD ± 12.948 years. By age group, over sixty-two cases in the study (47%) were aged between 30 and 40 years and 5 (3.8%) were above 70 years of age.

Most participants were married (88.6%). Seventy-two (55.8%) breast cancer patients involved in this study were uneducated, while only two patients (1.5%) were medical personnel. Of the total participants, four (3%) and five (3.8%) had a family and personal history of breast cancer, respectively. None of the patients had a history of radiation exposure to the chest wall. All the patients with a personal and family history of breast cancer were females (**Table 1**).

Table 1: Frequency distribution of socio-demographic characteristics of breast cancer.

Variables		Frequency	Percentage
Sex (male/female)		13/119	9.8/90.2
Age at diagnosis (years)	<30	19	14.4
	30-40	62	47
	41-50	23	17.4
	51-60	14	10.6
	61-70	9	6.8
	≥ 71	5	3.8
Marital status (single/married/divorced/widowed)		5/117/2/8	3.8/88.6/1.5/6.1
Level of education (uneducated/high school/diploma and above/ medical education)		73/46/11/2	55.3/34.8/8.3/1.5
Family history of breast cancer (yes/no)		4/128	3/97
Personal history of breast cancer (yes/no)		5/127	3.8/96.2
History of chest wall irradiation (yes/no)		0/132	0/100

Patient and Clinical-Related Factors of Breast Cancer Management Outcome

Among all patients, only 9 (6.8%) knew about breast cancer and breast cancer screening, 8 (88.9%) used BSE as a screening method and 1 (11.1%) used ultrasound. Most patients 129 (97.7%) with breast masses were diagnosed with breast carcinoma. Approximately 67 (50.8%) patients had right-sided breast cancer, whereas only one patient had bilateral breast cancer.

The duration of presentation ranged from 1 month to 24 months, with a mean duration of 7.87 months and standard deviation of 3.283 months. Only 3.8% (5/132) of patients presented with symptoms within 3 months of the onset of symptoms of breast cancer and 66.6% presented with symptoms ≥ 7 months after the onset of symptoms. Breast lumps or masses (98.5%) were the most common finding, followed by axillary lymphadenopathy (15.9%), skin changes (5.3%) and nipple discharge (1.5%). Clinical staging of breast cancer was documented in all patients and the majorities (77.5%) of the patients were in the late stage of the disease; only 22.5% of the patients were diagnosed with stage II disease. Among the male patients, 10 (76.9%) were stage III and all stage 4 breast cancer patients were female.

Of the 132 patients studied in this paper, 125 (94.69%) investigated by FNAC were consistent with breast cancer (93.9%) and phyllodes tumor (2.4%). The histological report was conclusive for invasive breast carcinoma in 70 (53.0%) patients. Among patients with breast carcinoma, 55 (41.7%) and 52 (39.4%) were moderately differentiated and well-differentiated, respectively. Evidence of distant metastases was noted in 2 patients (1.5%) (**Table 2**).

Table 2: Frequency of patient and clinical related factors of breast cancer.

Variables		Frequency	Percentage (%)
Knowledge about breast cancer and screening use (yes/no)		9/123	6.8/93.2
Stage of cancer (stage 1/2/3/4)		0/29/93/7	0/22.5/72.1/5.4
FNAC result	Ductal carcinoma	124	93.9
	Lobular carcinoma	5	3.8
	Phyllodes tumor	3	2.3
Types of histologic biopsy result	Invasive ductal ca	70	53
	Lobular carcinoma	3	2.3
	NST	53	40.2
	Mixed lobular and ductal carcinoma	1	0.8
	Mucinous carcinoma	1	0.8
Side affected (right/left/bilateral)		67/64/1	50.8/48.5/0.8
Histologic grade	Well differentiated	52	39.4
	Moderately differentiated	55	41.7
	Poorly differentiated	12	9.1
	Unknown	13	9.8
Causes of breast mass (carcinoma/ phyllodes tumor)		129/3	97.7/2.3
Duration of presentation in months (≤ 3/4-6/7-9/10-12/>12)		5/39/66/16/6	3.8/29.5/50/12.1/4.5

Hormonal Status of Breast Cancer Patients

17 (12.9%) patients were nulliparous and non-breastfeeding. Most cases 94 (71.2%) were premenopausal. Of all patients reviewed in this study, only 19 (14.4%) had hormonal status determination, of which 14 (73.7%) expressed estrogen receptors (**Table 3**).

Table 3: Frequency distribution of breast cancer patients' hormonal status.

Variables	Frequency	Percentage
Parity (nulliparous/multiparous)	17/115	12.9/87.1
Breastfeeding (yes/no)	115/17	87.1/12.9
Menstrual status (Premenopausal/Post menopause)	94/38	71.2/28.8
Hormonal status of the tumor (ER+/ER-/ ER-,PR-/unknown)	14/4/1/113	10.6/3.0/0.8/85.6

Management of Breast Cancer

Patients with breast cancer in this study were operated between 2 and 150 days after diagnosis with a mean duration of 32.56 days ± 23.368 days. Among all patients, 124 (93.9%) underwent MRM with or without axillary LN dissection, 6 (4.5%) underwent toilet mastectomy for advanced breast cancer, and 2 patients with phyllodes tumor underwent simple mastectomy. Only 6/108 (5.56%) patients had positive surgical margins and 16 (12.1%) had lympho-vascular invasion. Amongst 132 patients who underwent surgery for breast cancer, only 1 (0.8%) case was referred for XRT. NACT was administered in the form of AC, FAC and AC-taxol to six (4.5%) patients with late disease and the response was partial in 83.3% of patients. The study participants were followed up for 1 to 15 months; with a mean of 7.88 ± 2.443 months (**Figure 1 and Table 4**).

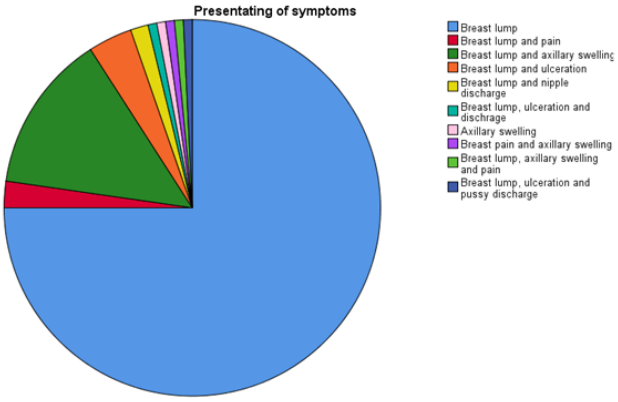

Figure 1: Frequency distribution of breast cancer presenting complaints.

Table 4: Frequency of management related factors.

Variables		Frequency	Percentage
Surgical procedure done (MRM/Simple mastectomy/Toilet mastectomy)		124/2/6	93.9/1.5/4.5
Mode of management	MRM only	3	2.3
	MRM and CHT	79	59.8
	MRM, CHT & HRT	35	26.5
	NACT, MRM, CHT	2	1.5
	NACT, MRM, CHT, HRT	4	3
	Simple mastectomy	2	1.5
	Toilet mastectomy and CHT	6	4.5
	MRM, CHT, referral for XRT	1	0.8
Regimen of chemotherapy (AC/FAC/AC-taxol/did not take)		25/13/89/5	18.9/9.8/67.4/3.8
Does the patient take NACT (yes/no)		6/126	4.5/95.5
Response to NACT (complete/partial/no response)		0/5/1	0/83.3/16.7
Surgical margin status (positive/negative/unknown)		6/102/24	4.5/77.3/18.2
Lympho-vascular invasion status (positive/negative/unknown)		16/50/66	12.1/37.9/50.0
How many cycles of CHT (<6 cycle/>6 cycle)		5/127	3.8/96.2

Management Outcome of Breast Cancer

About 32 (24.2%) and 2 (1.5%) of patients operated at both hospitals had seroma and flap necrosis respectively. The majority of case 82 (62.1%) were discharged within 5 days of operation and about 81.8% had improved condition on subsequent follow-up. Among 132 cases, only 5 (3.8%) patients had recurrence and all recurrences were loco-regional. 5 (3.8%) died (Table 5 and Figure 2).

Table 5: Frequency distribution of management outcomes of breast cancer.

Variable		Frequency	Percentage (%)
Complications up to discharge	Surgical site infection	9	6.8
	Seroma	32	24.2
	Flap necrosis	2	1.5
	Lymphedema	2	1.5
	No complications	87	65.9
Recurrence (yes/no)		5/127	3.8/96.2
Site of recurrence	Axilla	1	20
	Chest wall	2	40
	Axillary and chest wall	1	20
	Ipsilateral breast	1	20
	Distant	0	0
Length of hospital stays (1-5 days/6-10 days/>10 days)		82/36/14	62.1/27.3/10.6
Condition of the patient on subsequent follow up (improved/same/ died/deteriorated)		108/14/5/5	81.8/10.6/3.8/3.8

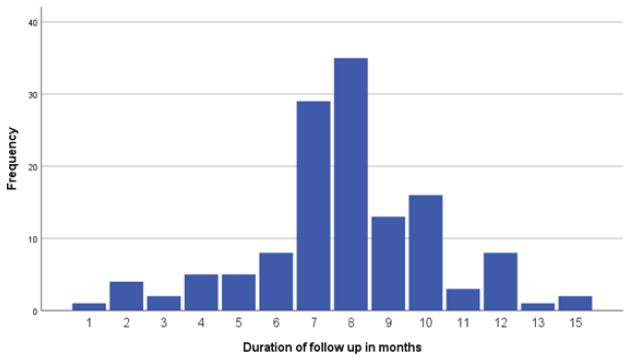

Figure 2: Frequency distribution showing duration of follow up in months.

Factors Associated with Outcomes of Breast Cancer Management

Cross-tabulation and logistic regression analysis were performed to determine the association between independent variables and short-term local wound complications among operated patients with breast cancer at both institutions.

Binary and multivariable logistic regression analyses were performed between short-term local complications (dependent variable) and socio-demographic, patient and clinical factors and treatment-related factors of breast cancer (independent variables). On binary logistic regression, age group, marital status, level of education, presenting complaints, duration of presentation, stage of the tumor, menstrual status, type of biopsy result, waiting time for surgery after diagnosis, surgical margin status, lympho-vascular invasion status and NACT use had a p-value of ≤ 0.25 compared to short-term complications and the above independent variables were collectively analyzed with multi-variable logistic regression.

However, in multivariable logistic regression of socio-demographic, patient and clinical factors; treatment of breast cancer; and short-term complications or outcomes of surgical management (dependent variable), only presenting symptoms and waiting time for surgery after diagnosis remained significantly associated with breast cancer complications (AOR=0.28; 95% CI (0.09,0.93)) and (AOR=0.16; 95% CI (0.03,0.89)) respectively (Table 6).

Table 6: Binary and multivariable logistic regression analysis of variables associated with treatment related complications.

Variables	Category	Complications		COR (95%CI)
		No	Yes	
Sex	Male	8 (6.1%)	5 (3.8%)	1
	Female	79 (59.8%)	40 (30.3%)	0.81 (0.25,2.64)
Age groups	≤ 40 years	60 (45.5%)	21 (15.9%)	0.26 (0.08-0.85**
	41-60 years	21 (15.9%)	16 (12.1%)	0.57 (0.17,1.979
	>60 years	6 (4.5%)	8 (6.1%)	1
Marital status	Unmarried	7 (5.3%)	8 (6.1%)	1
	Married	80 (60.6%)	37 (28.0%)	0.41 (0.14,1.20)*
Level of education	Uneducated	45 (34.1%)	28 (21.2%)	1
	Educated	42 (31.8%)	177 (12.9%)	0.65 (0.31,1.36)*
Presenting complaints	Breast lump only	74 (56.1%)	25 (18.9%)	0.22 (0.09,0.50)**
	Lump and other symptoms or other symptoms only	13 (9.8%)	20 (15.2%)	1
Duration of presentation	≤ 6 months	33 (25.0%)	11 (8.3%)	0.53 (0.24,1.19)*
	>6 months	54 (40.9%)	34 (25.8%)	1
Side affected	Right	44 (33.3%)	23 (17.4%)	1
	Left	42 (31.8%)	22 (16.7%)	1.00 (0.49,2.06)
	Bilateral	1 (0.7%)	0 (0%)	0.00 (0.00,)
Stage at diagnosis	Early	23 (17.8%)	6 (4.7%)	0.41 (0.15,1.09)*
	Late	61 (47.3%)	39 (30.2%)	1
Waiting time for surgery	<10 days	12 (9.1%)	6 (4.5%)	0.71 (0.23,2.15)
	10-30 days	41 (31.1%)	15 (11.4%)	0.52 (0.24,1.14)*
	>30 days	34 (25.8%)	24 (18.2%)	1
Parity	Nulliparous	13 (10.9%)	4 (3.4%)	0.56 (0.17,1.80)
	Multiparous	66 (55.5%)	36 (30.3%)	1
Breast feeding	Yes	66 (55.5%)	36 (30.3%)	1.31 (0.43,4.01)
	No	12 (10.1%)	5 (4.2%)	1
Menstrual status	Pre-menopause	66 (55.0%)	29 (24.2%)	0.48 (0.19,1.17)*
	Post-menopause	13 (10.8%)	12 (10.0%)	1
Personal history of breast ca	Yes	1 (0.8%)	4 (3.0%)	1
	No	86 (65.2%)	41 (31/1%)	0.12 (0.01,1.10)
Types of biopsy result	NST	51 (38.6%)	36 (27.3%)	1
	Specified breast cancer	36 (27.3%)	9 (6.8%)	0.35 (0.15,0.83)**

Histologic grade	Well-D	40 (30.3)	12 (9.1%)	1
	Moderately-D	32 (24.2%)	23 (17.4%)	2.39 (1.04,5.54)**
	Poorly -D	6 (4.5%)	6 (4.5%)	3.33 (0.91,12.26)*
	Unknown	9 (6.8%)	4 (3.0%)	1.48 (0.39,5.67)
Margin status	Positive	2 (1.5%)	4 (3.0%)	1
	Negative	69 (52.3%)	33 (25.0%)	0.24 (0.04,1.37)*
	Unknown	16 (12.1%)	8 (6.1%)	0.25 (0.04,1.66)*
LVI status	Positive	7 (5.3%)	9 (6.8%)	1
	Negative	33 (25.0%)	17 (12.9%)	0.40 (0.13,1.26)*
	Unknown	47 (35.6%)	19 (14.4%)	0.31 (0.10,0.97)**
Mode of mgt	Surgery only	15 (11.4%)	5 (3.8%)	0.69 (0.21,2.32)
	Surgery and CHT	45 (34.1%)	27 (20.5%)	1.25 (0.55,2.82)
	Surgery, CHT and HRT	27 (20.5%)	13 (9.8%)	1
NACT use	Yes	9 (6.8%)	9 (6.8%)	1
	No	78 (59.1%)	36 (27.3%)	0.46 (0.17,1.26)*
CHT regimen	AC	18 (13.6%)	7 (5.3%)	0.74 (0.28,2.96)
	FAC	8 (6.1%)	6 (4.5%)	1.43 (0.46,4.48)
	AC-taxol	61 (46.2%)	32 (24.2%)	1
Length of hospital stay	1-5 days	80 (60.6%)	2 (1.5%)	0.01 (0.002,0.06)**
	6-10 days	3 (2.3%)	33 (25.0%)	4.40 (0.84,23.04)*
	>10 days	4 (3.0%)	10 (7.6%)	1
Duration of follow up	≤ 6 months	19 (14.4%)	7 (5.3%)	0.66 (0.25,1.71)
	>6 months	68 (51.5%)	39 (28.8%)	1

Note: *Means p value is ≤ 0.25, **means p value of <0.05, D-stands for differentiated

DISCUSSION

Breast cancer is the most common site-specific cancer in women worldwide and is responsible for 12.5% of cancers in both sexes. In this series, the female-to-male ratio of 9.15:1.0 showed that the disease affects more female populations in Ethiopia than in other African countries. Approximately 64.4% of the patients were within the range of 30 to 50 years of age, which is similar to the finding in TASH. Among all the participants in this study, only 9 (6.8%) had knowledge about breast cancer and used screening methods. Two (1.5%) and two (1.5%) patients presented with breast lumps together with nipple discharge, breast ulceration and pussy discharge, respectively. Most patients present late at the advanced stage. Approximately 75.8% of cases were diagnosed at stages III and IV. However, this rate was higher than that in Addis Ababa (54.2%). This gap may be due to several reasons. The absence of screening combined with the low rate of cancer awareness and practice of BSE and the unavailability of multimodality treatment are possible reasons for the late presentation. Another possible reason is that most patients came with referral papers, which resulted in delayed diagnosis and treatment.

The surgical margin status was reported in 106 patients. Among them, only 6 (5.5%) cases had a positive surgical margin. Our results were lower than those of previous studies in Gondar, in which 6 of 29 cases had a positive surgical margin. Only 19 patients underwent tests for hormonal status (expression of estrogen and progesterone receptors), and 5 (26.32%) did not express estrogen receptors. The overall rate

of complications in breast cancer management was 45/132 (34.1%) in a mean follow-up period of 7.87 months. Seroma formation was the most frequent. Among these patients, only 2/132 cases had flap necrosis and lymphedema observed in 1.5% of patients, which is similar to the findings of Daniel et al. 25 This, finding is lower than that reported in a review of the literature on mastectomy flap necrosis (5-30%). 26 However, compared to Caren G. Solomon et al., study on lymphedema after breast cancer treatment the incidence of lymphedema in our study is minimal. The discrepancy in results observed among studies might be due to inadequate documentation in our setup. Five (3.8%) patients had recurrence and the most common site of the chest wall was twice that of the axilla. This finding is lower than that of the study by Addis (26.5%), but the most common site was the same.

After multivariable regression analysis, presenting symptoms and waiting time for surgery had a significant effect on the short-term complications of breast cancer treatment. Accordingly, after adjusting other covariates, the odds of having short-term complication of breast cancer among those who wait surgery ≤ 10 days were 84% less likely compared to those who wait more than 30 days (AOR=0.16; 95% CI (0.03,0.89)). This study also finds out the odds of having short-term complication of breast cancer treatment among those who presented with breast lump only were 72% less probable compared to those who presented with lump and other complaints of breast cancer (AOR=0.28; 95% CI (0.09,0.93)). However, a clinical trial on the impact of the wait time from NACT to surgery in breast cancer: Does time to surgery affect patient outcomes? Valerie et al. did not find any statistically significant differences in surgical complications (p=0.90). But, in certain breast cancer subtypes, such as triple-negative breast cancer, poorer outcomes have been observed in patients with delays greater than 30 days after surgery.

CONCLUSION

In conclusion, breast cancer commonly affects premenopausal women and more than half of the patients are younger than 50 years of age. The main presenting symptom was breast lump, and most patients presented with late-stage disease. The most common histological type of breast cancer is ductal carcinoma. MRM is the primary treatment modality. Approximately one-third of patients had wound-related complications. Patients who underwent surgery within the first 10 days of diagnosis and those who presented with a breast lump only had a decreased incidence of short-term complications.

ETHICAL APPROVAL

Ethical clearance obtained from the Institutional Review Board (IRB) of College of Medicine and health sciences, Bahir Dar University, Ethiopia. Then, we got letter of permission from TGSH and FHRH medical director office research unit. Oral informed consent taken during a phone call while collecting missed information from the chart.

ETHICAL AND CONSENT

Institutionally approved letters from the TGSH and FHRH for publishing this paper are provided.

DISCLOSURE

There is no financial interest or personal relationships that wound influence the work reported in this study.

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