مجلـــــة السعيد للعلـــــوم الإنســـانيـــة والتطبيقية
Al - Saeed Journal of Humanities and Applied Sciences
journal@alsaeeduni.net
Vol (6), No(1), January, 2023 المجلد(6)، العدد(1)، 2023م
ISSN: 2616 – 6305 (Print) ISSN: 2790-7554 (Online)

Factors lead to delay Management of Breast Cancer among Female Patients Under Therapy in Hadhramout Oncology Center-Mukalla 2021-2022

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تاريخ تسليم البحث 2022/9/19م تاريخ قبوله للنشر 2022/12/1م

https://alsaeeduni.net/colleges/research-and-strategic/2017-03-10-08-03-59

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Abstract

Background: Breast cancer is the most frequent malignancy tumors among women. Without treatment, a malignant breast tumor advances in stage, diminishing a woman's chances of survival, Advanced breast cancer presentation remains a large obstacle in lowering mortality rates in low- and middle-resource countries. This study aims to explore the reasons that cause women present with breast cancer at an advanced stage. in Hadhramout Oncology center in Al - Mukalla city, Yemen.

Methods: A descriptive cross sectional design, eighty–eight patients were selected from admitted patient's to clinics in Hadhramout oncology center-Mukalla. Data was collected from 7th February to 10th August 2022, Data was collected through face-to-face interviews using a structured questionnaire.

Results: The results of the present study revealed that majority of participants 73 (83%) were between 31 and 60 years of age. More than half of them 50 (56.8%) are educated while a great majority 83 (94.3%) are housewives. Most presenting symptom is the presence of painless lump in the breast with more than half of the entire sample involved in the research equal 53 (60.2%). Presence of the ulcer over the breast was the less presenting symptom in this study (11.4%) of all cases involved.

There's significant relation between education and place of living (Urban-Rural area) and use of traditional treatment (P-value=<0.05). There's no significant relation between disease stage and level of education (with P-value=.576), socioeconomic statue (with P-value=.133). Finally, there's no significant relation between socioeconomic status and disease stage with (P-value=.133).

Conclusion and Recommendation: This study revealed that most participants has positive perspective toward factors that lead to delayed management. The ministry of public health recommended to establish more cancer centers to facilitate early detection and treatment for patients, increase number of media campaigns concerned with awareness-raising and early screening method and improve the health workers proficiency in early detection of breast cancer.

Key Words: Breast cancer, Oncology center, Mukalla City Delayed management.

العوامل التي تؤدى إلى تأخير معالجة سرطان الثدي لدى النساء المصابات بسرطان الثدي تحت المعالجة بمركز السرطان بالمكلا 2021-2022

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الملخص بالعربي

الخلفية: سـرطان الثدي هو أكثر الأورام الخبيثة شـيوعًا بين النسـاء بدون علاج، يتقدم ورم الثدي الخبيث في المرحلة، مما يقلل من فرص بقاء المرأة على قيد الحياة، ولا يزال ظهور الأعراض المتقدمة لسـرطان الثدي يمثل عقبة كبيرة في خفض معدلات الوفيات في البلدان ذات الموارد المنخفضة والمتوسطة. تهدف هذه الدراسة إلى استكشاف أسباب وصول النساء إلى مراحل متقدمة من سرطان الثدي.

المنهجية: تم إجراء دراسـة وصـفية مقطعية بين ثماني وثمانين حالة تم أخذها من المريضـات في قسم العلاج ألكيميائي بالإضافة إلى العيادات الخارجية في مركز حضرموت للأورام في المكلا، وبدأ أخذ العينات من/فبراير2022 إلى 10/اغسـطس 2022، وتم جمع البيانات من خلال المقابلات وجهًا لوجه باستخدام استبيان منظم ومرمز، وإدخاله في قاعدة بيانات محوسبة قبل تحليله باستخدام إحصاءات SPSS.

النتائج: تتراوح أعمار المرضـى بين 31 و60 سـنة ويمثل 73(83٪) كما أن أكثر من نصـفهم 50(56.8٪) متعلمون بينما الغالبية العظمى 83(94.3٪) ربات منازل.

يظهر أن أكثر الأعراض التي تظهر هو وجود كتلة غير مؤلمة في الثدي حيث يسـاوي أكثر من نصف العينة بأكملها في البحث 53(60.2٪) ويظهر أيضًا أن اقل الأعراض ظهورا كان وجود قرحة على الثدي مع 11 حالة (11.4٪) من جميع الحالات المعنية. اظهرت النتائج علاقة جيدة بين مسـتوى التعليم وعدم الوعي بالمرض. (القيمة ف = 0.04) ولا توجد علاقة كبيرة بين مرحلة المرض ومستوى التعليم (مع قيمة (P = .576)، الحالة الاجتماعية والاقتصادية بقيمة (P =.133) ومكان المعيشة بقيمة (P = .292). أخيرًا، لا توجد علاقة كبيرة بين الحالة الاجتماعية والاقتصادية مع مرحلة المرض (P-value = .133).

الاسـتنتاج والتوصـيات: اظهرت الدراسـة توجه ايجابي لدى المشـاركات بخصـوص العوامل المعيقة لطلب الرعاية لمرض سـرطان الثدي. وبناء على نتائج الدراسـة نوصـي الوزارات الحكومية المعنية بتأسيس وزيادة المراكز التشخيصية لمرض سرطان الثدي والحملات التوعوية ورفع مستوى الكادر الصحي والمتطوع لاكتشاف الحالات في وقت مبكر.

الكلمات مفتاحيه: سرطان الثدي، مركز السرطان مدينة المكلا، تأخر المعالجة.

Introduction:

Cancer is second leading cause of mortality globally and the third leading cause of death in low- and middle-income countries. Breast cancer is one of the most frequently diagnosed cancers, which affects mostly women [1].

Breast cancer is the abnormal growth and uncontrolled division of cells in the breast. Cancer cells can invade and destroy surrounding tissue, and may metastasize (spread) throughout the body via blood or lymph fluid to other parts of the body. Breast cancer [2].

Breast cancer is the most prevalent cancer type in females worldwide. According to the global cancer incidence, mortality and prevalence database (GLOBOCAN) report, about 2.08 million new breast cancer cases were diagnosed in 2018, accounting for 24.2% of all cancer cases. It is the leading cause of mortality, contributing to 15% of total cancer deaths specifically in less developed countries. Previous studies have also endorsed that the incidence of breast cancer is higher in developed countries [3,4].

In 2020, there were 2.3 million women diagnosed with breast cancer and 685 000 deaths globally. As of the end of 2020, there were 7.8 million women alive who were diagnosed with breast cancer in the past 5 years, making it the world's most prevalent cancer. There is more lost disability-adjusted life years (DALYs) by women to breast cancer globally than any other type of cancer. Breast cancer occurs in every country of the world in women at any age after puberty but with increasing rates in later life [3-5].

The peak age of breast cancer in some Asian and African countries were over 10 years earlier than in European or American countries. As for the trend of breast cancer, the age–standardized increased rates significantly increased in China and South Korea but decreased in the United States of American (USA) during 2000-2012. Meanwhile, the age- standardized mortality rates significantly increased in China and South Korea but decreased in the United Kingdom, the USA, and Australia during 2000 and 2015 [6].

Incidence of breast cancer in the Arab world has risen gradually between 1990 and 2016. The rate of increase appears to be similar to the global trend. Without any intervention, it is predicted that the incidence is likely to continue to rise over the next 10 years, both globally and in the Arab world.

The incidence of breast cancer in 2016 among women in the Arab region (28/100,000) was lower than the global mean (46/100,000). However, compared with those in Western Europe (148/100,000), the incidence rates were strikingly lower. [6].

Breast cancer reported as the top of different types of cancer in Yemen according to oncology cancer report 2021. A total of 2201 patients were identified with a diagnosis of invasive breast cancer. Between January 2016 and December 2020. [4,5,7].

Early detection of the disease increase the chance of effective therapy. Treatment for breast cancer often consists of a combination of surgical intervention, radiation therapy, and drugs (hormone therapy, chemotherapy, and/or targeted biological therapy) to treat microscopic cancer that has spread from the breast tumor to the blood. Such treatment can prevent cancer from growing and spreading, saving lives [5,7].

First clinical presenting symptoms (breast or axillary lump, skin changes, breast pain, nipple discharge, bone pain…), breast self-examination, family history of breast cancer, tumor size (cm) and classification of disease [3].

Many sociodemographic factors, clinical factors, and patients' experiences have been reported as influencing presentation delay. Age, residence, distance to a medical facility, marital status, education level, occupation, insurance, health facility visits, visiting traditional medicine practitioners, knowledge of breast cancer, breast self-examination, initial symptom, family history of breast cancer, and comorbidities are factors that have been associated with delays in both presentation and subsequent diagnosis [8].

A study in Ethiopia revealed that most common reasons for late presentation to a health facility were lack of awareness about early symptoms of breast cancer (345, 92.9%), use of traditional and spiritual treatment options (286, 77.1%), financial problems for medical care and transport costs (217, 58.5%), relating early symptoms with other medical problems (132, 35.6%), belief that breast cancer has not any medical treatments (88, 23.7%), fear of surgery (loss of breast), and lack of trust on Health care provider (HCP) (35, 9.4%) [8].

Delay is found between the appearance of the first symptoms and time of diagnosis and initiation of treatment in women who have breast cancer. Early diagnosis and treatment within 30 days is beneficial for patients and helps to increase survival rates. Delay between the appearance of symptoms and presentation to an oncologist depends on the patient's behavior and beliefs. Long waiting times can lead to advancement and complications in the disease process. Study of Chinese breast cancer patients found longer detection to treatment time interval with rural residence, low education level and older age [9,10].

So far there is very little data about causes of delay in breast cancer patients and increased the prevalence of breast cancer. delays of more than 6 months resulted in a worse disease-free survival. Since the delay of breast cancer diagnosis is critical in clinical practice, [11, 12]. Research in this area is very important so that clinicians can be more understanding when managing patients and policy makers can formulate strategies and implement activities that can prevent delay in the diagnosis and treatment of breast cancer [13].

The main objectives of the study to identify causes of late presentation and overall wait time at the beginning of treatment among breast cancer patients enrolled in Hadhramout oncology Center_Mukalla.

Significance of the study:

Delay in presentation and treatment of breast cancer were the common problem faced by the oncology center – Hadhramout as well as globally. According to oncology center statistics, those who n came in advance stage of breast cancer was 118 cases and it accounts for (12%) of all cancer cases in 2021, also international statistics found that about 1 in 8 women (about 13%) will develop invasive breast cancer over the course of her lifetime. Therefore this study conducted to explore factors that lead to delay in presentation, diagnosis and treatment of breast cancer, so that we could improve the quality of life of both cancer patient & survivors.

Research problem:

1- The case arrives at the oncology center at a late stage.
2- Lack of awareness of the people about breast cancer symptoms.
3- Lack of early detection of disease detection.

Research Question:

- Is there any association between socio-demographic characteristics and late management?
- Is there any association between socioeconomic status and late management?

General objective:

1- To identify the causes of delayed case management.
2- To reduce mortality and morbidity rates by improving detection and management.

Specific Objectives:

1- To define the reasons for patient delay in diagnosis and treatment of breast cancer.
2- To examine the association between delay and certain variables.

Methodology:

Study Design:

This was a descriptive cross sectional study to determine the reasons of delayed management for breast cancer patients under therapy in Hadhramout oncology center-Mukalla were started from 7/February 2022 to 10/August 2022.

It is collected by group of fourth year of nursing student from Hadhramout University college of nursing.

Study setting:

The study conducted among patient under chemotherapy in Hadhramout oncology center- Mukalla

Sample size:

Eighty–eight cases were taken from admission patient's in the department, as well as outpatient clinics in Hadhramout oncology center-Mukalla.

Inclusion criteria:

All female patients with advance stage of breast cancer under therapy.

Exclusion criteria:

- Women with first stage of breast cancer.
- Patient with other tumors than breast cancer.

Data Collection and tools:

Data was collected through face-to-face interviews using a structured questionnaire adapted from relevant literature from various studies along with a few modifications based on local practices. The questionnaire was reviewed by experts in this field of study. They examine face and content validity of questionnaire needed correction done. The data collection was started from 7/February 2022 to 10/August 2022 in Hadhramaut oncology center-Mukalla. Each interview lasted between 10 and 15 minutes. The questionnaire included four parts.

The first part consisted of questions on the socio-demographic details of the participants.
The second part included patients with presenting symptoms.
The third part included Patient health behaviors and diagnostic factors.
The forth part included Factors associated with delayed management of breast cancer.

Data Analysis:

The collected data from the questionnaire was viewed, coded entered into a computerized database before being analyzed through human analysis using the descriptive statistical tables (frequency, average …) and were use computer program like Microsoft (word, excel), this data was also displayed in tables for qualitative data.

Limitation:

1- Limited period: The period during which samples were taken for this study to identify risk factors was short**.**
2- Some samples are not obliged to attend on time by the center.
3- Some samples refused to participate in the interview, fill out the questionnaire and did not respond.

Ethical consideration:

The study was reviewed and approved by clinical research committee of the faculty of nursing at the university of Hadhramout, official approved was taken by Ibn-Sena oncology center and the anonymity and confidentiality of patients were assured and their decision to participate voluntarily in this study was respected.

Results:

Socio-demographic characteristics of the participants

Table (1) shows that a large proportion 73 (83%) of patients are between the ages of 31 and 60. More than half of them 50 (56.8%) are educated while a great majority 83 (94.3%) are housewives. More than half of females involved lives in rural areas and the number of those whose economic status is considered to be poor is 75%.

Table (1): Socio-demographic characteristics

Socio-demographic Characteristics	Variable	Frequency No. (88)	Percentage %
Age groups in years:	=< 30	6	6.8
	31-60	73	83.0
	61-90	9	10.2
Level of education	Illiterate	38	43.2
	Educated	50	56.8
Marital status	Single	8	9.1
	Married or previously married	80	90.9
Economic status	Low	66	75.0
	Medium	22	25.0
	High	0	0
Occupation	House wife	83	94.3
	Employee	5	5.7
Place of living	Urban	43	48.9
	Rural area	45	51.1
Total		88	100

The presenting symptoms

The most presenting symptom in this study with more than half of the entire participants 53 (60.2%) is the presence of painless lump in the breast while the less presenting symptom is the presence of the ulcer over the breast with a 11 (11.4%) table(2).

Table (2): Frequency of presenting symptoms among participants.

		Frequencies		Total	Means	Std. Deviation
		Yes	No			
Painless lump in the breast	No	53	35	88	1.40	.492
	%	60.2	39.8	100		
Lump in armpit	No	17	71	88	1.81	.397
	%	19.3	80.7	100		
Change in breast shape	No	39	49	88	1.56	.500
	%	44.3	55.7	100		
Nipple discharge	No	19	69	88	1.78	.414
	%	21.6	78.4	100		
Painful lump in breast	No	34	54	88	1.61	.490
	%	38.6	61.4	100		
Redness\swelling over breast	No	29	59	88	1.67	.473
	%	33.0	67.0	100		
Ulcer over breast	No	10	78	88	1.89	.319
	%	11.4	88.6	100		

Factors that may lead to delayed breast cancer management:

Table (3) clarifies some factors that may lead to delayed management as use of traditional treatment shows 59(67.0%) do not agree. Similarly 59(67.0%) Clinical or hospital was not too far away. The majority of participants (n= 66, 75%) Fear of the cost of anticipated treatment neither fear of surgical procedure are not obstacles for treatment. Fear from chemotherapy treatment and from stigma of disease reported only by (28.4%) and fear of stigma of disease (6.8%). It was reported by (n=67, 76.1%) that no awareness of disease.

Table (3): Distribution of the factors that may lead to delayed management

Factors		Frequencies		Total	Means	Std. Deviation
		Yes	No			
Use traditional treatment	N	29	59	88	1.67	.473
	Percent	33.0	67.0	100		
Clinical or hospital was too far away	N	29	59	88	1.67	.473
	Percent	33.0	67.0	100		
Fear of the cost of anticipated treatment	N	22	66	88	1.75	.435
	Percent	25.0	75.0	100		
Fear of surgical procedure	N	25	63	88	1.72	.454
	Percent	28.4	71.6	100		
Fear from chemotherapy treatment	N	25	63	88	1.72	.454
	Percent	28.4	71.6	100		
Fear from stigma of disease	N	6	82	88	1.93	.254
	Percent	6.8	93.2	100		
No awareness of disease	N	67	21	88	1.24	.429
	Percent	76.1	23.9	100		
Denial and anxiety of disease	N	19	69	88	1.78	.414
	Percent	21.6	78.4	100		
Fear from the diagnosis of disease	N	18	70	88	1.80	.406
	Percent	20.5	79.5	100		

Relation between level of education and awareness of disease.

Analysis by chi-square indicated that there is correlation between level of education and awareness of the disease (P-value= 0.04).

Table (4): Relationship between level of education and awareness of the disease:

Variable		awareness of disease		Total	Sig
		Yes	No		
Level of education	Illiterate	5	33	38	0.04*
	Educated	34	16	50	
Total		39	49	88	

Relation between level of education and first visit to the clinic.

Analysis by chi-square indicated that there is correlation between level of education and first visit to the clinics (P-value = 0.03). Where majority of educated participants (n=41,88%) visit the clinic when symptoms began while only (n=5,15%) of the illiterate has done **Table (5).**

Table (5): Relationship between level of education and first visit to the clinic.

Variable		First visit to clinic when the symptoms began		Total	Sig
		Yes	No		
Level of education	Illiterate	18	20	38	0.03*
	Educated	41	9	50	
Total		27	61	88	

Relation between disease stage and socioeconomic status.

Table (6): Shows analysis by chi-square indicated that there is no correlation between disease stage and socioeconomic status (P-value= 0.133).

Table (6): Relationship between disease stage and socioeconomic status

Variable		Socioeconomic status		Total	Sig
		Medium	Poor		
Disease stage	Stage 2	37	17	45	.133
	Stage 3	24	3	27	
	Stage4	5	2	7	
Total		66	22	88	

Place of living and use of traditional treatment.

The table (7) indicated significant correlation between place of living (Urban -Rural) and use of traditional treatment (P-value=0.05).

Table (7): Relationship between place of living and use of traditional treatment.

Variable		Use of traditional treatment		Total	Sig
		Yes	No		
Place of living	Urban	10	33	43	0.05*
	Rural	19	26	45	
Total		29	59	88	

Discussion:

Breast cancer is one of the most frequently diagnosed cancers, which affects mostly women [1]. The aim of this study is to identify the reasons of delayed case management among female patients whom under therapy in Hadhramout oncology Center-Mukalla and to reduce mortality and morbidity rates by improving detection and management.

Our study revealed that the largest proportion of the patients 73 (83%) were aged between 31 and 60 years, followed by a 9 patients (10.2%) between 61-90 years and the less proportion 6 (6.8%) was for the patent who aged less than 30 years old. Nearly the same in many studies More than half participants above of patient were above 40 years. [1,12,14]

In this study more than half of patient are educated (56.8%) and (43.2%) were illiterate, similar to study of David R et.al 2022, while in Ethiopia the illiterate patient was (36.7%), which reflect similar culture environment [1,14], The great majority of patient were married or previously married (divorced, widow) (90.9%) and three quarters (75%) are considered as poor social statue, nearly as a study in Pakistan the married were (99.2%), and (67.2%) had poor social statue. [2], More than half 45 (51.1%) living in rural areas nearly but a little bit less than a study in Vietnam and Kisii county, Kenya who lives in rural areas about respectively (61.5. 84.4%). [14,15].

According to our research the most presenting symptom in patient involved is painless lump in breast 67 (76.1%), less percentage from study in Pakistan almost all patients (96%) complained from painless lump in their breast [3].

Also the presence of breast ulcers is less common symptom in our study 10 out of 88 patients (11.4%), Unlike a study done in Ethiopia the percent of painful wounds is about (43.4%). [1,3] In my point of view this could be from wrong believes and use of traditional treatment were they remain untreated for longer period.

One third (33%) of patients use the traditional treatment, not consistent with study in Morocco traditional treatment were only (12.7%). use [8], this can be explained as the community in morocco have a good awareness about the disease.

Fear of the cost of anticipated treatment don’t exceed of quarter (25%) in our study while in Pakistan is reported in (81%) of patient [3], this result indicates that the charity and nongovernmental organizations of society provide help and support to those who need it.

For our study there's no significant relationship between disease stage and level of education, socioeconomic status and living place, but a study in Morocco there were a significantly higher risk of delay was found among rural women (P-value=0.035) [8].

Our study shows that there is significant correlation relationship between living place and the use of traditional treatment with a (P-value=0.05), similar to a study in Morocco shows that use of traditional methods was significantly associated with rural area (P-value=0.000) [8].

Conclusion

Delay was defined as the number of months between breast symptom onset and the patient's first presentation to a medical professional, early detection can reduce the mortality rate and the burden on health facilities. Large proportion 73 (83%) of patients are between the ages of 31 and 60. There is a good significant correlation between level of education and no awareness of disease. (P-value= 0.04). There is no significant correlation between disease stage and level of education (with P-value=.576), socioeconomic statue (with P-value=.133) and living place (with P-value=.292).

In addition, there is no significant correlation between socioeconomic status and disease stage with (P-value=.133). The results also show that there is significant correlation between the socioeconomic status and the use of traditional treatment. (P-value=0.05)

Recommendations:

Based on the finding of the study recommend Government :

1- Establish a cancer centers to facilitate treatment for patients.
2- Increase number of centers specializing in early detection and provide screening and radiology devices in the centers so that the patient does not have to travel long distances for them.
3- Increase number of media campaigns concerned with awareness-raising and early screening methods.
4- Voluntary awareness-raising campaigns conducted by qualified personnel.
5- Future research is needed to measure people's knowledge and qualitative studies.

ACKNOWLEDGMENT

Sincere thanks to l director of national oncology centers in Mukala as well as patients who agree to participate in the study. Special thanks to the group of nursing students Shoroq Abdullah Alburiki., Mohammed Omer Ba Mohammed, Marwa saeed Bakhulha, Hafsa Abdulmohsen Badukhen, Mariam Ahmed Aliw Nosiba Salim Kaityand dnan Ahmed Bakili.

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