Late Presentation Of Breast Cancer In Aden, Yemen

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Abstract

The aim of this study is to determine the frequency and characteristics of patients who presented with late stage breast cancer at Al-Amal Oncology Unit in Aden. It was conducted retrospectively in Aden, at Al-Amal Oncology Unit of Al-Gamhouria Modern General Hospital, by reviewing all records of breast cancer patients at any stage and attended with histopathologically documented breast cancer from the time of establishment of the unit on December 1, 2007 to December 31, 2009.

The total number of documented breast cancer patients was 197 and classified according to the stage at presentation and after the exclusion of 21 patients who were not staged.

118 patients with late inoperable stages were selected and carefully evaluated of their demographic characteristics and was found that they represented 67.0% of the total staged breast cancer patients. Most of these patients are in the reproductive age and residents of Aden governorate and neighboring governorates. Metastasis was mainly evident at the lymph nodes, bones, liver and lungs. The case fatality rate for late stage breast cancer is 8.5 per 100 patients.

This study concludes that a high percentage of Yemeni patients in Aden presented with late stage breast cancer which led to the failure of possible curative surgical intervention and resulted to high metastatic disease and fatality rate.

Keywords

Late Presentation, Aden, Yemen, Breast Cancer, Stages

Introduction

Breast cancer is the commonest malignancy of females all over the world and the second leading cause of death due to cancer among females.(¹) All women regardless of their racial or ethnic origin or heritage are at risk of developing breast cancer.(¹,²)

The incidence of breast cancer is lower in developing countries than in developed countries, but the stage at presentation is much later. In many developed countries, organized mammography screening is available at the population level while developing countries lack such facilities.(³) However, early diagnosis, referral and treatment of breast cancer, is of far greater prognostic importance than any attempt to treat the disease at the later stages (mainly stages III and IV).(⁴,⁵)

This study was conducted at Al-Amal Oncology Unit in Aden where cancer patients from the southern and eastern governorates of Yemen seek medical help. In this unit, it was observed that a significant number of breast cancer patients presented themselves during the late stage of the disease, i.e. with local and/or distant metastasis. This study was conducted to determine the frequency and characteristics of these patients with the objective of presenting recommendations that will promote and encourage early presentation of breast cancer and lessen the fatality rate among Yemeni patients.

Patients and Methods

This is a descriptive retrospective study conducted by reviewing all breast cancer records at Al-Amal Oncology Unit of Al-Gamhouria Modern General Hospital, Aden, Yemen. This study noted that there were 197 records of patients who attended with histopathologically
documented breast cancer cases from December 1, 2007 to December 31, 2009.

Patients were classified at presentation according to the American Joint Committee on Cancer (AJCC) staging system and as a result, 21 patients were excluded who were not staged during admission. The remaining patients were 176 and were grouped according to their stage as follows:

- **Stage I**: 18
- **Stage II**: 40
- **Stage III**: 54
- **Stage IV**: 64
- **Total**: 176 patients

 Patients included in this study are those who presented with late stages and with inoperable stage III (n=54) and all patients with stage IV (n=64). The data of these patients (n=118) were analyzed using a statistical software package (SPSS version 15) and grouped as demographic and clinical data.

For ethical consideration, patient record numbers instead of patient names were used to protect and safeguard the identities of the patients.

### Result

Since the establishment of Al-Amal Oncology Unit in Aden, late stage presentation of breast cancer represented 67.0% of the total staged breast cancer patients on record (118 out of 176 patients with staged breast cancer) (Figure 1).

Almost all patients who presented with late stage breast cancer were females 115 (97.5%) in addition to 3 males (2.5%). Most of them are in the reproductive age, from 30 to 49 years (58.5%), residents of Aden governorate and neighboring governorates of Lahj and Abyan (Table 1). No difference was found between the sites of affected breast tissue, and metastasis

| Stage I   | 18 |
| Stage II  | 40 |
| Stage III | 54 |
| Stage IV  | 64 |
| Total     | 176 |

![Fig. 1: Frequency of late stage presentation breast cancer in Al-Amal Oncology Unit - Aden - Dec. 1st, 2007 to Dec. 31st, 2009](image)
was mainly evident at the lymph nodes, bones, liver and lungs (Table 2). All these patients were planned for chemotherapy, 15.3% of them were planned for chemotherapy alone, 42.4% were planned for radiotherapy following chemotherapy while 33.1% were planned for hormonal therapy following chemotherapy and 9.3% were planned for chemo-radiotherapy and hormonal therapy (Table 2). Curative surgical intervention was not possible in all these patients.

Among the studied patients, 10 patients have died as on date of this study, representing a case fatality rate of 8.5/100 breast cancer patients with late presentation, and the remaining patients are still alive with variable degrees of metastasis (Figure 2).

Fig. 2 : Case fatality rate among late stage presentation breast cancer patients

**Discussion**

Late stage presentation of breast cancer in Aden represented 67.0% of the total diagnosed and staged patients with breast cancer. In comparing the frequency of late stage presentation breast cancer in other countries, it was found that in Pakistan (Karachi), Baloch and Iqbal (2006), reported 70% of their patients presented with Stage III breast disease and in 2008, Naeem M. et al., in Peshawar reported 78.3% of breast cancers as late presentation (Stage III and IV).

In Nigeria, from 1987 to 1997, the percentage of late presentation breast cancer (Stage III and IV) was 72%. In Sabah, Malaysia, from a total of 186 breast cancer patients reported in 2005-2006, late presentation (Stage III and IV) represented 52.2%.

In developed countries, late stage presentation of breast cancer is not as high as that of developing countries. Data from the Trent Cancer Registry, Sheffield, UK (1998–2006) showed that about 49.6% were presented in late stage breast cancer (including Stage II according to their classification).

Even in developed countries, studies have shown that low socio-economic status of women is one of the factors that lead to delayed presentation of breast cancer. In Florida, higher than expected incidence of late stage breast cancer was seen in women living in severely poor areas (OR = 2.6) and women living in areas of near poverty (OR = 1.4), i.e. women living in near poverty were 50% more likely to be diagnosed with a late stage breast cancer than women residing in non-poor areas.

It is supposed that the magnitude of this problem in Aden is higher than that estimated by this study since there are patients not staged and others attended to the oncology unit with clinical and radiological metastatic breast cancer without histopathological documents and refused any intervention for diagnosis.

There are different factors that contribute to the high percentage of delayed presentation of patients in Aden and the neighboring governorates, such as: a) low socio-economic conditions, b) mistaken attribution of symptoms as benign process, c) the belief that it is better “not to know”, d) the decision to pursue local therapies first, e) fear of cancer, f) competing life demands and g) not enough oncologists and cancer treatment centers in Yemen.

The review of the characteristics of patients with late stage presentation of breast cancer in this study shows that the common age group was 40-49 years old (37.3%). This is close to the findings of the study in Malaysia, where the common age group affected with late stage presentation breast cancer was 40 to 49 years old (32.3%). In the study of Iran, the common age group affected by delayed presentation of breast cancer was 45-54 years (35.4%).

Because most breast cancer cases in Aden, Lahj and Abyan (Yemen) were females in their reproductive ages, it is recommended that the establishment of breast cancer prevention center with mammography in Aden should be
mandatory, in addition to the availability of cancer management centers and continuous training program of medical staff on early cancer detection. In Egypt,\(^{(13)}\) for example, the progress of availability of breast cancer management from 1984 until June 2007 was associated with a decline in the percentage of late presentation from 1987 to 2007. In Sarawak, Malaysia,\(^{(14)}\) a program of training health staff in hospital and rural clinics to improve their skills in early cancer detection, and raising public awareness through pamphlets, posters and sensitization by health staff led to a reduction in presentation of breast cancer in Stage III and IV from 60% (1994) to 35% (1998) (p<0.0001).

Late-stage presentation of breast cancer is associated with poor survival.\(^{(15)}\) The case fatality rate in this study was 8.5%. Screening and awareness programs on behalf of health authorities in developed countries contribute to earlier detection of this disease and thus making curative treatment much more likely to be successful and thus improving overall survival rates.

There is an urgent need for the establishment of screening and awareness programs in Aden to decrease the frequency of late stage presentation and improve the survival rate of breast cancer patients.

**Conclusions**

1. There is a high percentage of patients with breast cancer in Aden, Yemen who presented with late stage disease that led to the failure of possible curative surgical intervention and resulted to high metastatic disease and fatality rate;

2. Most of breast cancer patients are in their reproductive age and residents of Aden, Lahj and Abyan governorates;

3. Low socio-economic status and poor health education are the major factors that contribute to a high percentage of late stage presentation of breast cancer.

**Recommendations**

1. It is recommended that cost-free early breast cancer detection facilities (including mammogram) should be established as early as possible to decrease the frequency of late stage breast cancers in Aden and the neighboring governorates;

2. There should be a continuous medical education program and training for health staff in hospitals and clinics to improve their knowledge and skills in detecting early stages of breast cancer;

3. Further national prospective studies are recommended to identify the exact situation of the problem in Yemen and to identify the causes of delayed presentation among Yemeni women.

**References**


