

Breast cancer in south-east Republic of Yemen

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سرطان الثدي في الجنوب الشرقي من اليمن جمال عبد الحميد، محمد سالم الطيب وأمين أحمد باوزير

خلاصة: درس معدل انتشار سرطان الثدي في الجنوب الشرقي من اليمن بإجراء دراسة استيعادية تناولت سجلات المعالجة في مركز السرطان في عدن والسجلات المحفوظة في المستشفى التعليمي "الجمهورية" وسجلات المرضى المسجلين في مركز السرطان في عدن في الفترة بين كانون الثاني/يناير 1997 وكانون الأول/ديسمبر 1998، وتناولنا بالتحليل كلاً من العمر والجنس والسكن والثدي المصاب ونمط السرطان. وقد تبين أن هناك 227 مريضاً مسجلاً لإصابة بسرطان الثدي في الفترة بين كانون الثاني/يناير 1989 وكانون الأول/ديسمبر 1998 منهم 225 امرأة ورجلان. وقد كان لدى معظم المرضى (81.5%) منهم سرطان قنوي مرتشح، وعاني 90% من المرضى من إصابة العقد اللمفية. وكان أكثر فئات الأعمار المصابة تتراوح بين 30-39 عاماً و40-49 عاماً.

ABSTRACT A retrospective study of breast cancer was carried out using the treatment registry of Aden Health Office and archives of Al-Gamhoria Teaching Hospital from January 1989 to December 1996 and the records of patients registered at Aden Cancer Centre from January 1997 to December 1998. The data analysed included age, sex, residence, breast affected and type of cancer. There were 227 patients with breast cancer registered between January 1989 and December 1998; 225 were female and 2 were male. Most of the patients (81.5%) had infiltrating ductal carcinoma. About 90% of the patients had lymph node involvement. The age groups most affected were 30–39 years and 40–49 years.

Le cancer du sein dans le sud-est de la République du Yémen

RESUME Une étude rétrospective des cas de cancer du sein a été réalisée à l'aide du registre des cas de cancer traités du Bureau sanitaire d'Aden et des archives de l'Hôpital universitaire Al-Gamhoria de janvier 1989 à décembre 1996 ainsi que des dossiers des patients enregistrés au Centre du cancer d'Aden de janvier 1997 à décembre 1998. Les données analysées comprenaient l'âge, le sexe, le lieu de résidence, le sein affecté et le type de cancer. Il y a eu 227 patients atteints d'un cancer du sein enregistrés entre janvier 1989 et décembre 1998 ; 225 étaient des femmes et 2 des hommes. La plupart des patients (81,5 %) avaient un carcinome canalaire invasif. Pour environ 90 % des patients, il y avait une atteinte des ganglions lymphatiques. Les groupes d'âge de 30 à 39 ans et de 40 à 49 ans étaient ceux les plus touchés.

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Introduction

Breast cancer is an insidious disease that may be present and may develop over many years without signs or symptoms of any kind.

In 2000, the worldwide incidence of breast cancer was estimated to be 833 661 new cases per year, and about 376 611 died from the disease [1]. Breast cancer was third in frequency when both sexes were considered together and by far the most prevalent cancer in women. The incidence rates are increasing in all countries with available statistics, and the impact of the disease is magnified because women are at risk from their late thirties.

Breast cancer is the most frequently diagnosed cancer in American women, and the second most frequent cause of cancer death [2]. Studies that focused on cancer in the United States between 1988 and 1990 documented that the lifetime risk of developing breast cancer in women was 12.2% or 1 in 8 [3]. In 2001, there were approximately 193 700 new cases and 40 000 deaths from breast cancer in the United States [4]. These numbers are too large to comprehend but they break down into one newly diagnosed breast cancer case every 3 minutes and one death from breast cancer every 13 minutes.

The natural history of breast cancer is characterized by long duration and heterogeneity among patients. Currently about half of the patients registered in American cancer centres with a diagnosis of breast cancer can be expected to live out the rest of their lives without recurrence and one-third will die of their disease, but there is no time point at which patients can be completely reassured [5].

Methods

A retrospective study was carried out using the treatment registry of Aden Health Office and archives of Al-Gamhoria Teaching Hospital from January 1989 to December 1996 and the records of patients registered at the Aden Cancer Centre from January 1997 to December 1998. The treatment registry of Aden Health Office is a register of all patients who are recommended for treatment in Aden Hospitals and for funding for treatment outside the Republic of Yemen. Aden Cancer Registry started to function as a hospital-based registry in early 1997 and it is the first cancer registry in the country. All records were checked to avoid repetition of cases. The data analysed included age, sex, residence, breast affected and type of cancer.

Results

There were 227 patients with breast cancer registered between January 1989 and December 1998; 225 were female and 2 were male. Twenty-five patients (11%) had no histological evidence of lymph node disease and 202 patients (89%) had metastatic disease in the axilla. Most of the patients (81.5%) had infiltrating ductal carcinoma (Table 1). About 90% of the patients had lymph node involvement. As regards the breast involved, 119 cases were in the right breast, 101 in the left and 2 cases were bilateral. In 5 cases, the side was not mentioned. There were 4 cases with history of multiple fibroadenoma in the same breast.

The highest percentage of cases was in the age group 40–49 years, followed by 30–39 years and 50–59 years (Table 2). A few (8) patients were in the age group of 20–29 years, with one patient of 19 years.

Table 1 Distribution of 227 breast cancer patients according to type of cancer

Type of cancer	No. of patients	%
Infiltrating ductal carcinoma	185	81.5
Infiltrating lobular carcinoma	13	5.7
Intraductal papillary carcinoma	6	2.6
Sarcoma	3	1.3
Mucinous	2	0.9
Ductal carcinoma <i>in situ</i>	2	0.9
Medullary carcinoma	2	0.9
Lymphoma	1	0.4
Not typed	13	5.7
Total	227	100

The results show 75% of the cases were from Aden Governorate, followed by cases from Lahij and Abyan (Table 3). This does not reflect the prevalence of breast

Table 2 Distribution of breast cancer according to age group

Age group (years)	No. of patients	%
19	1	0.4
20-29	8	3.5
30-39	72	31.7
40-49	79	34.8
50-59	45	19.8
60-69	14	6.2
≥70	5	2.2
Unknown	3	1.3
Total	227	100

Table 3 Distribution of breast cancer according to area of residency

Governorate	No. of patients	%
Aden	171	75.3
Lahij	29	12.8
Abyan	17	7.5
Shabwa	3	1.3
Hadramout	3	1.3
Other	4	1.8
Total	227	100

cancer in these governorates because Al-Gamhori Teaching Hospital not only treats cancer patients from Aden Governorate but also some cases referred from peripheral hospitals.

Discussion

Cancer registry statistics on cancer in Yemeni women are poor or nonexistent. However, a study on cancer cases in south-eastern Republic of Yemen during the period 1989-93 showed that breast cancer was the most common malignancy in women [6]. This study was undertaken in an effort to confirm the hypothesis that cases of breast cancer in the country may not be identified until the disease is in the late stages or after metastasis has occurred and hence indicate the need for early diagnosis and treatment.

Infiltrating ductal carcinoma constituted 81.5% of the breast cancer cases, which is similar to the global prevalence [6]. Fewer cases of carcinoma *in situ* reflect the late diagnosis of breast cancer in the Republic of Yemen, contrasted with Europe and the United States, where there

are developed programmes for early detection of breast cancer.

In our study, the female to male ratio of cases was 113:1; the reported ratios elsewhere vary from 200:1 to 100:1.

The age group involved in our country is younger than in Europe and the United States. The most common age group in which the disease was diagnosed was women in the fourth decade (34.8%), followed by women in the third decade (31.7%) and fifth decade (19.8%). The mean age at diagnosis in European women is reported to vary from 63 years (England) to 57 years (Estonia) [8]. In the United States, 60% of cases of breast cancer are diagnosed in women over 60 years [9]. This percentage is likely to grow, not only because older age is the most important risk factor for breast cancer but because of gains in life expectancy and decreases in deaths due to cardiovascular disease.

Increasing incidence rates of breast cancer were reported in Denmark and Iceland before organized mammography screening was introduced [10]. Studies from the United States [11,12] show declining incidence rates since the late 1980s after several years of extended use of mammography in asymptomatic women. Lower use of mammography screening has been linked to more advanced disease at presentation in low-income women [13]. Not only is more advanced disease less amenable to tissue-sparing surgery, financial constraints tend to result in lower use of breast-conserving surgery. In addition, there is an absence of radiotherapy programmes in the Republic of Yemen and delays in chemotherapy treatment.

The factors known to place women at increased risk of breast cancer include previous breast cancer, a strong family history of breast cancer in a premenopausal mother or sister, early onset of menarche, late

menopause, and a patient having so-called benign breast disease [14]. There is an increasing awareness of the importance of the period between menarche and the birth of the first child in establishing future risk of breast cancer [15]. Factors such as adolescent nutrition (dietary fat consumption) and regular physical exercise [16] are thought to have an impact on later risk of developing breast cancer. Analysis of the prevalence of breast cancer and the risk factors will provide a better estimate and understanding of the increases in breast cancer that are still as yet unexplained.

In our study about 90% of the cancers were detected only after lymph node involvement (i.e. late), which suggests the need for a national cancer detection programme involving public education promotion of breast self-examination and simple screening procedures, and the early detection of breast cancer by use of mammography and fine needle aspiration. The situation in the Republic of Yemen is compounded by the fact that presentation and diagnosis is often late because of a lack of facilities for early detection and treatment. Because of this, 70% of the patients diagnosed with breast cancer require treatment outside the country.

Aden Cancer Centre, together with other groups such as the hospitals of the Ministry of Public Health and Population, the World Health Organization, the Yemen Women's Centre and international cancer associations are advocating for increased funds for research, both basic and applied and for increased support for early detection of breast (and cervical) carcinoma. This collaborative advocacy brings pressure on the government to address the problem caused by cancer and will foster effective action. What remains clear is that there is an urgent need for a comprehensive national approach to tackle this issue.

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