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The Prevalence of Risk Factors among Women Diagnosed with Breast Cancer

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Background: Breast cancer is a leading cause of death among women. Certain factors are associated with breast cancer.

Objectives: To estimate the prevalence of selected risk factors for breast cancer in female patients attending Salmaniya Medical Complex (Oncology Clinic). To identify the stage and size of the tumor at which the cancer is first diagnosed.

Methods: Ninety-three breast cancer patients attending the Oncology clinic during the month of January 1995 were interviewed. Information obtained included personal characteristics, diagnostic criteria, menstrual history, Obstetric and Gynecology history and history of cancer. Information was analyzed by "Excess" computer package.

Results: Most cases were in the age group 41-60 years. The age at menarche in 76% of study population was at or below 13 years. The age of natural menopause was between 41-50 years. The average size of the tumor was 5.5 cm. Eighty percent of women reported breast-feeding their children. Sixty percent of the patients have never used oral contraceptive pills in their lives. Only 8 cases (9%) had positive family history of breast cancer. Fifteen percent had their first full term pregnancy above 35 years of age.

Conclusion: In this study 53% of patients were between 41-60 years. The majority of patients were married and multiparous. Eighty percent of patients breast-fed their offspring more than one year and 60% never used oral contraceptive pills. The size of tumor at presentation was smaller among women with high level of education compared to those with low level of education.

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Breast Cancer is currently the leading cancer in the world in women[1]. It accounts for nearly 20% of all deaths in women from cancer[1]. Annual statistics in the State of Bahrain indicate a similar picture with breast cancer being the principal cancer in women[2].

Numerous factors were associated with an increased risk of developing breast cancer in women. These factors include: family history of cancer, early age of

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menarche, late age of menopause, artificial feeding of infants, oral contraceptive, late age at first full term pregnancy and smoking[3]. Studies have shown that screening for breast cancer helped to detect the disease at early stages. Therefore, it decreased mortality particularly in women over 50 years of age[4]. Identifying risk factors that are prevalent among women with breast cancer in Bahrain, would help the doctors to detect these cases early and offer these patients a better prognosis. Cancer is the third most common cause of death in Bahrain, accounting for 10% of all deaths in Bahrain[2]. The target population for breast cancer screening is women aged twenty-five years and above. Only 7.2% of these women were covered by the breast cancer-screening program in Bahrain[2].

The Aim of the study is:

- to estimate the prevalence of selected known risk factors for breast cancer in the female patient attending the Oncology Clinic Salmaniya Medical Center (SMC) and,
- to identify the stage and size of the tumor at which cancer is first diagnosed.

METHODS

A prospective study of the prevalence of common risk factors among breast cancer patients was done.

Ninety-three female patients diagnosed to have breast cancer and attending oncology clinic within the study month of January 1995 were included in the study. All nationalities and age groups were included. Certain information was retrieved from the medical records.

Information collect sheet was designed to include the following:

1. Age, marital status, nationality, educational level and occupation.
2. Date of diagnosis, breast affected at the time diagnosis, quadrant of breast affected, history of previous breast disease and size of tumor at diagnosis.
3. Age at menarche and age at menopause.
4. Age at first full term pregnancy, age at last full term pregnancy, number of pregnancies, number of children, history of breast feeding and history of use of oral contraceptive pills.
5. Personal history of cancer other than breast and family history of breast cancer. Information was collected in the “Information collection sheet” and personal interview of patients in Oncology Clinic, SMC.

RESULTS

Fifty three percent of patients were between 41-60 years of age. Seventy eight percent patients were either of low or middle education (Figure 2). Seventy six percent of the ladies had their menarche at or below the age of thirteen years (Tables 1 & 2).

Figure 2.

Table 1. **Distribution of cancer by age of menarche**

Age at menarche (years)	Number	%
<10	2	2.15
11	9	9.67
12	16	17.2
13	44	47.3
14	17	18.27
>=15	5	5.37
Total	93	100

Table 2. Relationship of size of tumor at first diagnosis and level of education

Size of tumor at 1st Diagnosis (cm)	<1	1-3	4-6	7-9	10-12	13-15	>15	Total
Level of education								
Low education (read, write & illiterate)	0	14	21	5	5	2	1	48
Middle education (primary & secondary)	0	7	14	4	0	0	0	25
Higher education (college & higher)	2	7	11	0	0	0	0	20
Total	2	28	46	9	5	2	1	93

The average size of tumor at first presentation was 5.5 cm. The most affected breast quadrant was the upper outer quadrant accounting for 57%. Fifty percent of patients were diagnosed at stage two. Lymph nodes involvement was detected in 68% of the patients.

The most common pathological finding was infiltrative ductal carcinoma, accounting for ninety percent of patients. The majority of patients had negative family history for cancer. Seventy five percent of the patients had their first full term pregnancy below the age of 30. Figure three shows that the most common method of tumor discovery was accidentally by the patient.

Figure 3.

DISCUSSION

The results showed that most patients were above 40 years. Reviewing literature showed that most breast cancer patients were above 50 years of age[3].

Seventy-five percent of patients discovered their lump accidentally by themselves. Reviewing literature showed that 80% of patient discovered their lumps by themselves[3]. Screening only contributed to discovery of one case in this study. Routine breast self examination has not been shown to be an effective method of screening of breast cancer, there is currently no evidence to support the view that it should be primary screening technique[7]. Breast awareness is a concept where women are encouraged to become familiar with the texture of their normal breast tissue and how it changes from the normal state and report changes with out delay. Breast awareness is a change from the regular, ritualistic process of breast self-examination; to one in which breast examination is built into women's life experience. The effectiveness of breast self-examination in reducing mortality from breast cancer has never been consistently demonstrated. Therefore, breast awareness is promoted[8].

Bahrain needs far more efforts in development of a screening program, which emphasizes the role of health education in the early detection of breast cancer. Most tumors at the time of diagnosis were more that 5 cm. in size, which indicates again poor health awareness.

The higher the level of education, the less likely the tumor at first diagnosis to be of a larger size. This relation was not statistically tested. Eighty percent of women reported breast-feeding their children. Byers and colleagues have reviewed several studies, which concluded that the findings on this issue are inconclusive and the significance of lactation as a protector is disputed[1]. A Saudi study concluded that breast feeding in no way gives any protection to the patient[5].

Ninety five percent had the pathological diagnosis of infiltrative ductal carcinoma, that is comparable with the literature[5]. Only 8 cases had positive family history of breast cancer. There is an eight fold increased risk for developing breast cancer in females with strong family history - mother and sister are mainly affected[6].

CONCLUSION

Most women with breast cancer in Bahrain presented at a late stage of the disease. Women with lower levels of education tend to present with larger size tumors.

Since breast cancer is the commonest cancer among women, we recommend: Further studies including case-control studies should be done to identify the risk factors for breast cancer among Bahraini population. Common risk factor known in the literature should be reviewed in light of the regional and racial differences.

The need for emphasizing the role of screening in the prevention of breast cancer.

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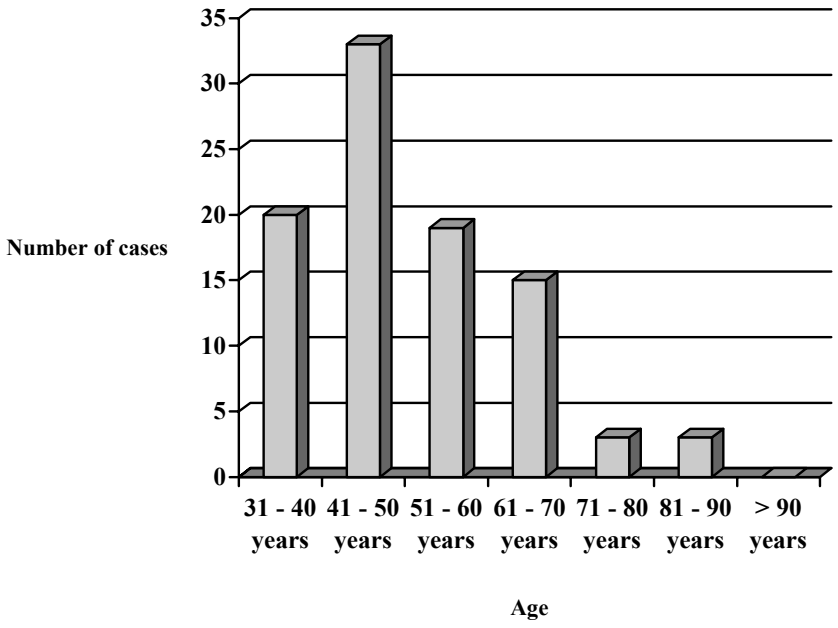
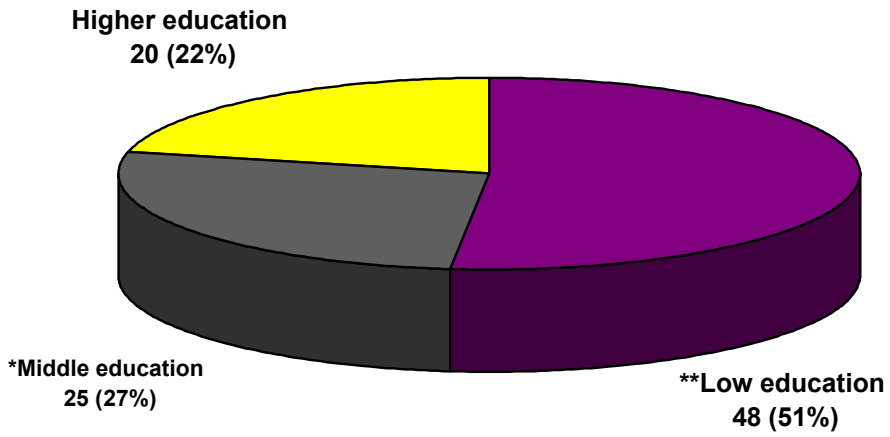
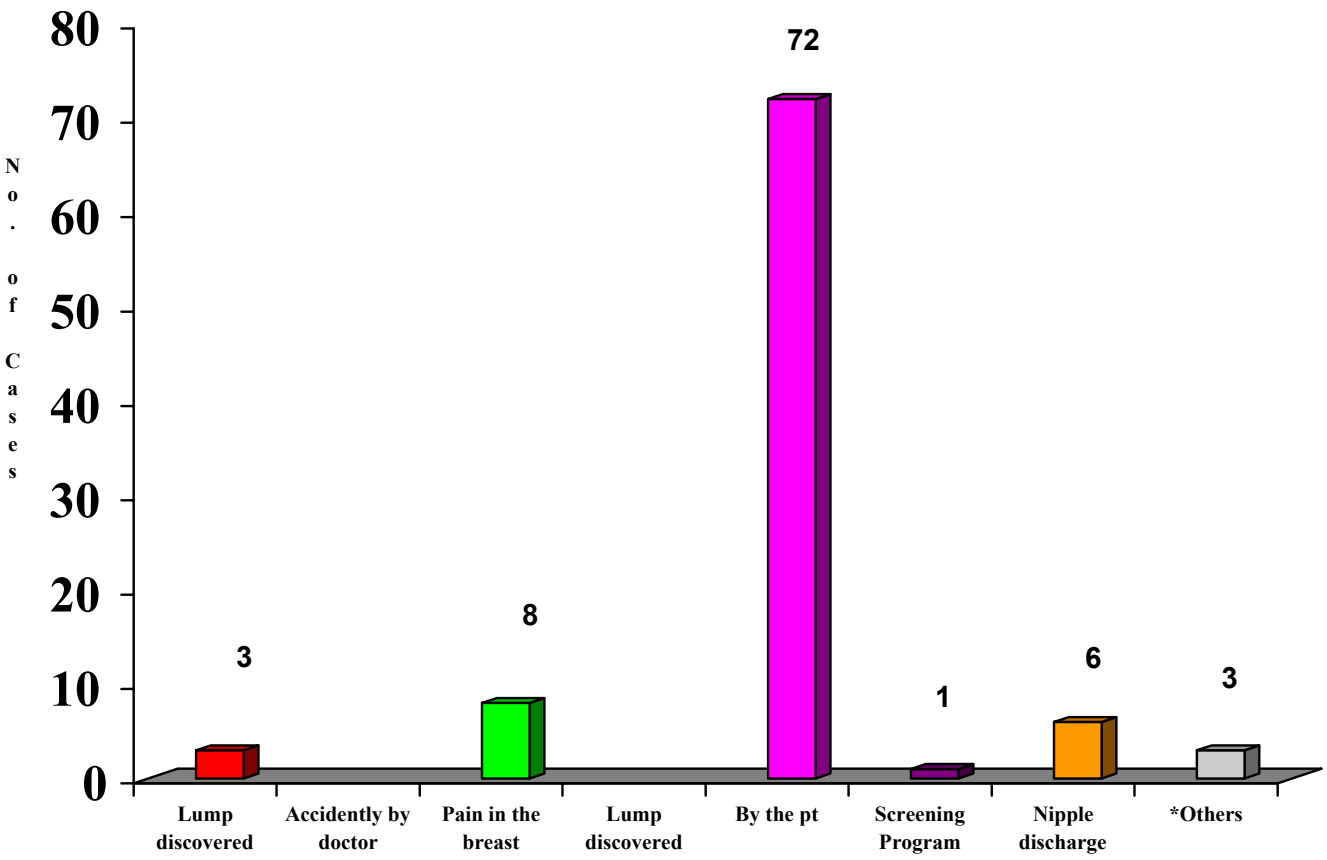




** Read & write + Primary
* Elementary & Secondary

Figure 1. Distribution of breast cancer patients by Age

Figure 2. Distribution of breast cancer patients by level of education



*Itching, retraction of nipple

Figure 3: Distribution of breast cancer patients by method of discovery