

Pathological Profile of Breast Cancer among Yemeni Patients

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Abstract

Background: There is a rising trend in the occurrence of breast diseases worldwide. The incidence of breast cancer is increasing in the developing countries due to increased life expectancy, increased urbanization and adoption of western lifestyle, lack of population awareness, delayed health seeking behavior and low levels of female education. In Yemen, breast cancer is considered the first cancer among Yemeni women (8) and the most leading cause of death.

Methods: A retrospective study of breast specimens from 354 women was taken from the private modern histology lab and Ibn Sina lab in Aden; between 2006- 2013. The data were collected from the referral sheets. All women with breast cancer underwent Fine Needle Aspiration Cytology (FNAC) and/or biopsy due to the presence of breast cancer for the purpose of diagnosis, were included.

Results: The results show 44% of the cases were from IBB Governorate, followed by 33% of cases from Aden. The age of the women with breast cancers ranged from 20 years (youngest patient) to 87 years (oldest patient) with a mean of 46.9 ± 12 years. 56.2% of lumps were in the right breast. Left breast was the next common (41.3%); with 3.5% of the cases affecting both breasts at the time of diagnosis. The overall pattern of breast cancer had invasive ductal carcinoma as the commonest finding (57.5%) followed by invasive lobular carcinoma (20%), in situ ductal carcinoma (13.2%) and in situ lobular carcinoma (3.4%). The less

frequent subtypes were malignant phyllodes which represented 2.3%. Papillary carcinoma, Medullary carcinoma and Mucinous carcinoma were 1.1% each respectively.

Conclusion: Malignant neoplastic breast lesions were mostly seen beyond the 4th decade. Invasive carcinoma was the most common malignant tumor among Yemeni women.

Key words: Malignant breast lesions, Yemeni women, invasive ductal carcinoma

Introduction

There is a rising trend in breast diseases worldwide, with an annual incidence of 200, 000 (1). The incidence of breast cancer is increasing in the developing countries due to increased life expectancy, increased urbanization and adoption of western lifestyle, lack of population awareness, delayed health seeking behavior and low levels of female education (2).

Breast cancer is the commonest malignancy of women in western countries and second most common in developing countries after cervical cancer and it is also the most common cause of cancer mortality in women (3).

There is a marked geographical variation in incidence rates, being highest in the developed world and lowest in the developing countries in Asia, Middle East, and Africa (4). Breast cancer rates are increasing in developed as well as developing countries. According to the World Health Organization (WHO) each year over 1.4 million women worldwide are diagnosed with breast cancer as it accounts for 23% of all newly diagnosed cancer (WHO, 2008)(5).

The most common risk factors are age over 40, history of mammary gland diseases, history of cancer in first-degree relatives, early menarche and late childbearing (after 35 years of age), woman's age and others (6,7).

In Yemen, breast cancer is considered the first cancer among Yemeni women (8) and the most leading cause of death (9).

Therefore, every change in the breast should be evaluated carefully for early detection of possible precancerous elements. In Yemen, the magnitude of the problem of breast diseases is not yet known.

The aim of current study is to study the demographic distribution and histopathological pattern of breast cancer among Yemeni women.

Materials and Methods

A descriptive retrospective study of breast specimens from 354 women was taken from the private modern histology lab and Ibn sina lab in Aden; between 2006- 2013. The data were collected from the referral sheets. All women with breast cancer underwent Fine Needle Aspiration Cytology (FNAC) and/or biopsy due to the presence of breast cancer for the purpose of diagnosis, were included. Four cases were excluded from the study as they were male cases. Therefore, the remaining 354 biopsies were included in the study.

Results

The total number of patient sheets reviewed was 354. The results show 44% of the cases were from IBB Governorate, followed by 33% of cases from Aden. (Table 1)

Figure 1: Regarding the age of the patients the highest percentage of carcinoma was found in 41–50 age category, followed by 31-40 and 51-60, < 30, > 60 respectively, as shown in Figure 1. The age of the women with breast cancers ranged from 20 years (youngest patient) to 87 years (oldest patient) with a mean of 46.9 ± 12 years.

Figure 2: 56.2% of lumps were in the right breast. Left breast was the next common with 41.3%. In 3.5% of the cases it was affecting the both breasts at the time of diagnosis, as shown in Figure 2.

In the overall pattern of breast cancer invasive ductal carcinoma was the commonest finding (57.5%) followed by Invasive lobular carcinoma (20%), in situ ductal carcinoma (13.2%) and in situ lobular carcinoma (3.4%). The less frequent subtypes were, Malignant phyllodes which represented 2.3%. Papillary carcinoma, Medullary carcinoma and Mucinous carcinoma were 1.1% each. Metaplastic carcinoma (0.3%) is rare and there was one case in the left breast in a patient 63 years old living in Aden.

Table 1: Distribution of breast cancer according to area of residency

Governorate	Frequency	Percent (%)
Aden	118	33.3
IBB	158	44.6
Al-Dhale	8	2.3
Abyan	19	5.4
Shabowa	8	2.3
Hadhramout	24	6.8
Taiz	5	1.4
Lahaj	11	3.1
Al-Baidha	1	.3
Al-Hudaïda	2	.6
Total	354	100.0

Figure 1: Distribution of breast cancer according to age group

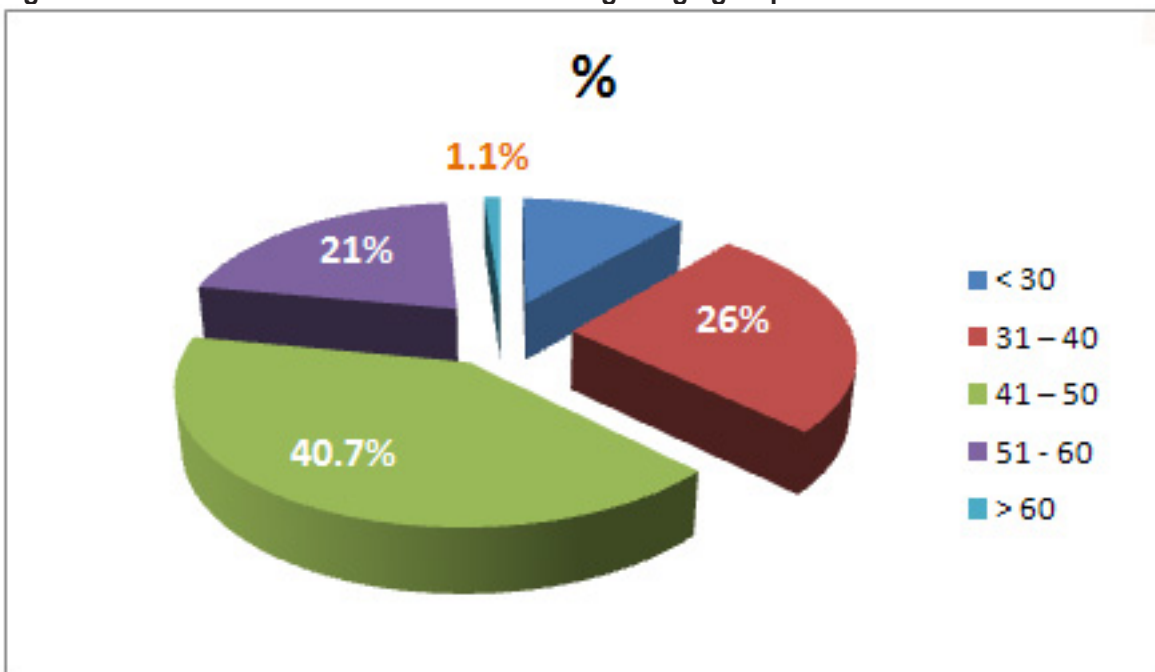
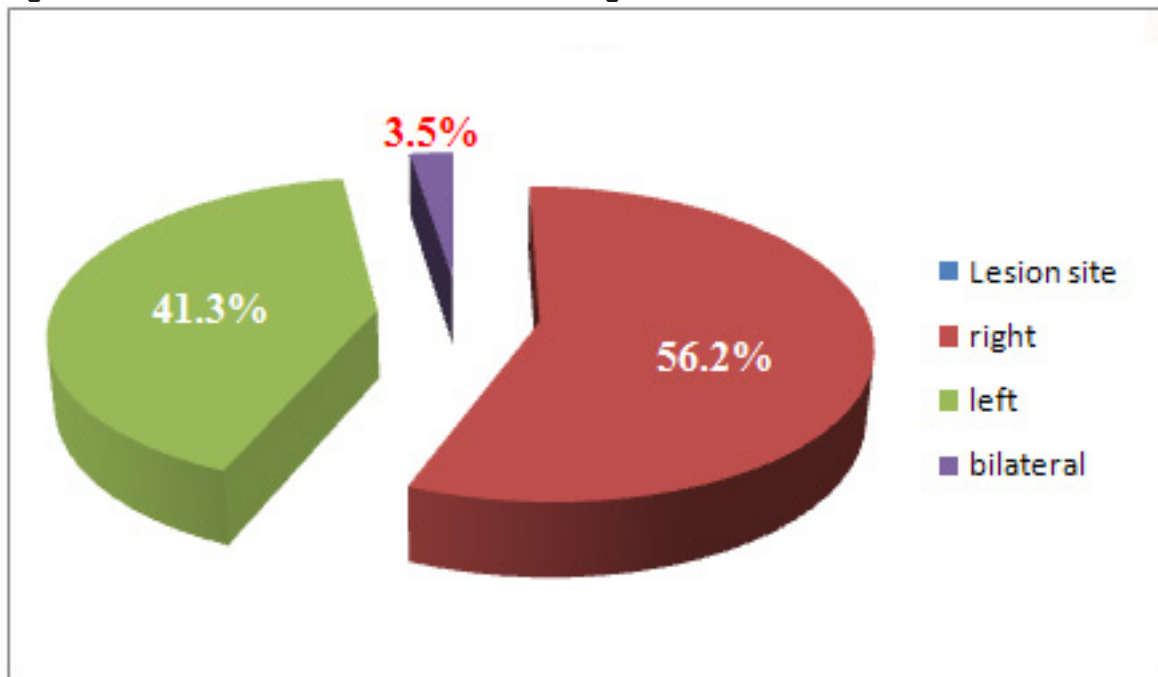


Figure 2: Distribution of breast cancer according to site of lesions**Table 2: Distribution of breast cancer according to histopathological pattern**

Type of cancer	No. of patients	%
In situ ductal carcinoma	46	13.2
Invasive ductal carcinoma	206	57.5
In situ Lobular carcinoma	12	3.4
Invasive lobular carcinoma.	71	20
Malignant phyllodes	8	2.3
Medullary carcinoma	4	1.1
Mucinous carcinoma	4	1.1
Papillary carcinoma	4	1.1
Metaplastic carcinoma	1	0.3
Total	354	100.0

Discussion

Breast cancer is the most common neoplasia in women (10). Most of our patients come from the rural area in IBB Governorate, followed by cases from Aden, which were consistent with other studies (11, 12,13).

Mean age of breast cancer presentation was in 46.9 years. Similar results were reported in other studies from Arab countries including 48.49 years in Saudi Arabia (Jamal, 2001), 49 years in Jordan (Aghassi et al., 2002), 49 years in Lebanon (El Saghir et al., 2002), 48 years in Egypt (Ibrahim et al., 2002) and 44 among Yamani patients(11). Alhaj (2012), found a significant higher frequency of subjects in the breast cancer group of age between 40-59 years. Sulhyan et al (2017) showed that tumours were seen beyond the 4th decade.

Of the 354 malignant lesions, the primary site of lesion in the majority of women was detected in the right site. It is similar to the rate reported in the literature (1,4, 19). Sulhyan et al (2017), found all the tumors involved the upper outer quadrant most frequently, contrarily some authors reported the left breast was more affected than the right one(20,21).

In our study invasive ductal carcinoma was s the most common variety of breast cancer as indicated in published data (19, 20, 21). Sulhyan et al (2017) reported that invasive carcinoma was the most common malignant tumor. Invasive lobular carcinoma was the second most common histologic type in this study accounting for 20% of cases, which is similar to the study of Raina et al (2005).

Malignant phyllodes tumor is a rare lesion of the breast that can mimic benign masses such as fibroadenomas on clinical diagnosis but is characterized by a typical rapid growth (25). It represents roughly 0.3%-0.9% of all breast cancers (26); in our study they represented 2.3% of all cases. It was more frequent than Medullary carcinoma, Mucinous carcinoma and Papillary carcinoma.

Conclusion

Malignant neoplastic breast lesions were mostly seen beyond the 4th decade. Invasive carcinoma was the most common malignant tumor.

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