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Research Article

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Breast Cancer Screening Campaign of 2018 and 2019 at Al-Mouwasat University Hospital in Damascus, Syria

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Abstract *Objective:* This study aimed to show the findings of the breast cancer screening campaign of 2018 and 2019. *Materials and Methods:* Our study was a cross-sectional study of all the women who reviewed the 2018 and 2019 breast cancer screening program at Al-Mouwasat University Hospital in Damascus, Syria. We included all the women who were tested and examined for breast lesions (total of 704). Statistical analysis was done using SPSS 25.0. *Results*: We found that most of the participants were between the age of 41-50 years old with 244 women, while only 16 cases of all participants were younger than 30 years old which composed the least common group. 27 cases of all women had a Breast Imaging Reporting and Data System (BIRADS) score of 4. *Conclusion*: Breast cancer screening and awareness are extremely important due to the high prevalence and mortality in women. We hope to bring more attention to it, and this article showed the importance of breast cancer and the annual screening tests in one of the largest hospitals in Damascus, Syria.

Keywords Breast cancer, Screening program, Awareness, Syrian women

Introduction

Breast cancer is the most common cancer and also the leading cause of cancer mortality in women worldwide. Approximately 1.38 million new breast cancer cases were diagnosed in 2008 with almost half of all breast cancer cases and nearly 60% of deaths occurring in lower income countries [1]. There is a large variation in breast cancer survival rates around the world, with an estimated 5-year survival of 80% in high-income countries to below 40% for low-income countries [2].

Low- and middle-income countries, which face resource and infrastructure constraints that challenge the goal of improving breast cancer outcomes by early detection, diagnosis and treatment [3]. In high-income countries such as the United States, approximately 232340 women were diagnosed and 39620 were died of breast cancer in 2013 [4]. The significant decrease in breast cancer-related mortality in the United States from 1975 to 2000 is attributed to continued improvement in both screening mammography and treatment [5,6]. According to the World Health Organization, improving breast cancer outcome and survival by early detection remains the cornerstone of breast cancer control.

Early diagnosis of the disease can lead to a good prognosis and a high survival rate. In North American, the 5-year relative survival rate of breast cancer patients is above 80% due to the timely detection of this disease [7]. Mammography is a widely used screening approach in the detecting of breast cancer and proved to help reduce the

mortality effectively. Other screening methods, such as Magnetic Resonance Imaging (MRI), which is more sensitive than mammography, have also been implemented and studied during the last decade [8]. There're numerous risk factors such as sex, aging, estrogen, family history, gene mutations and unhealthy lifestyle, which can increase the possibility of developing breast cancer [9]. Most breast cancer occur in women and the number of cases is 100 times higher in women than that in men [10,11].

Materials and Methods

This study was a cross-sectional study of all the women who reviewed the 2018 and 2019 breast cancer screening program in Al-Mouwasat University Hospital in Damascus, Syria. We included all the women (total number of 704 women) who were tested and examined for breast lesions and filled a questionnaire regarding the age, history, examination and the BIRADS score (which was decided based on the radiologist opinion). To ensure the privacy, only the authors collected all the data and all the names and personal information were blinded. Statistical analysis was done using SPSS 25.0.

Results

244 patients were between 41-50 years old, which was the most common age in our studies. (Figure 1)

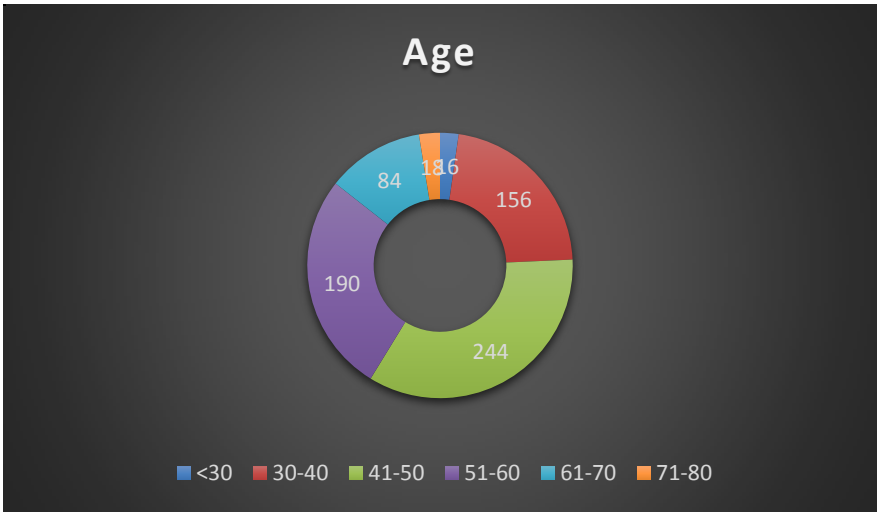

Figure 1: Age of participants in our study

The majority of women in our study were married (632 patients). (Figure 2)

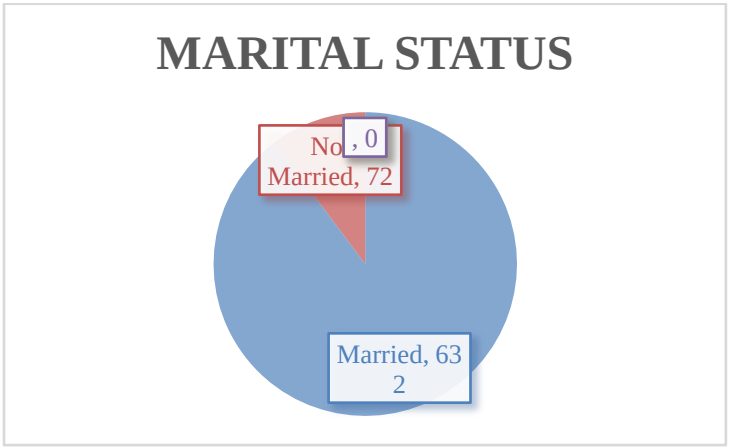

Figure 2: Marital status of participants in our study

Most of the women (148 women) had 3 children, followed by 134 patients had 4 children (Figure 3).

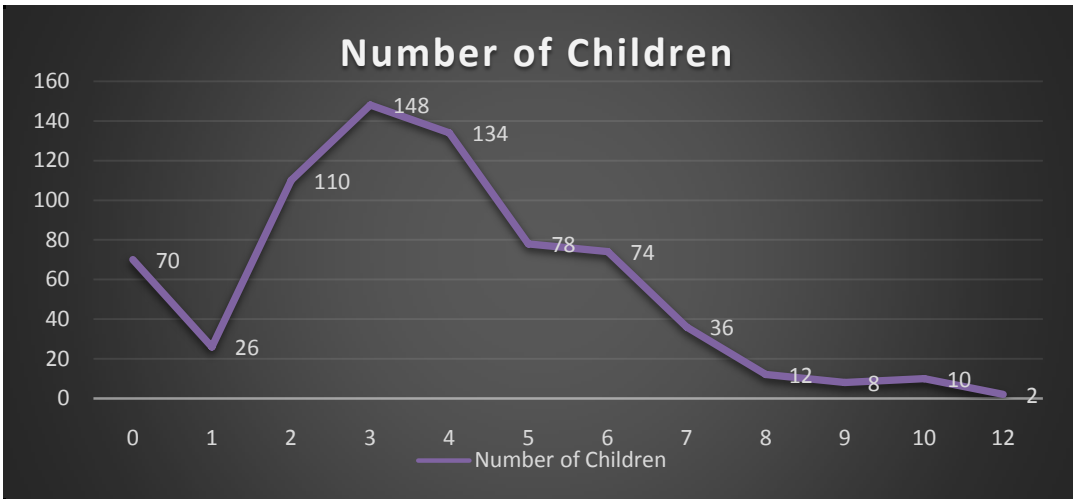

Figure 3: Number of Children of the participants in our study

632 of patients had breast fed their children, while only 152 did not.

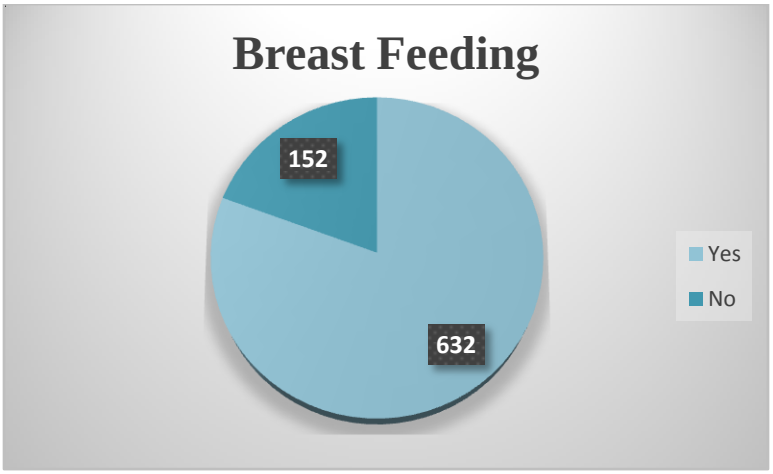

Figure 4: Breast feeding status in the participants of our study

We found that most of the women had no history of breast lesions (500 women), while others showed different personal history of one-side mastectomy, mass, abscess, cysts or cancer (Figure 5).

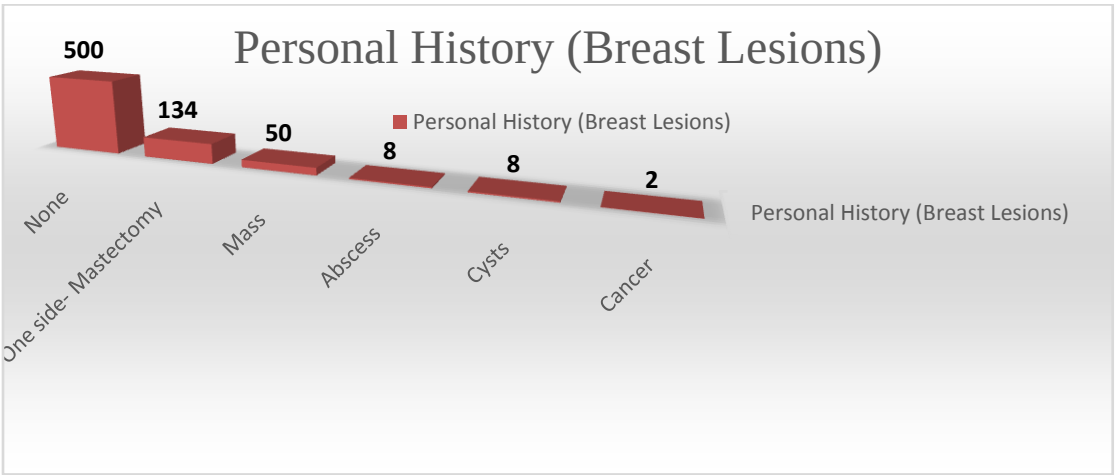

Figure 5: Personal History of Breast Lesions in the participants of our study

572 patients did not use hormonal drugs compared to 136 who did (Figure 6).

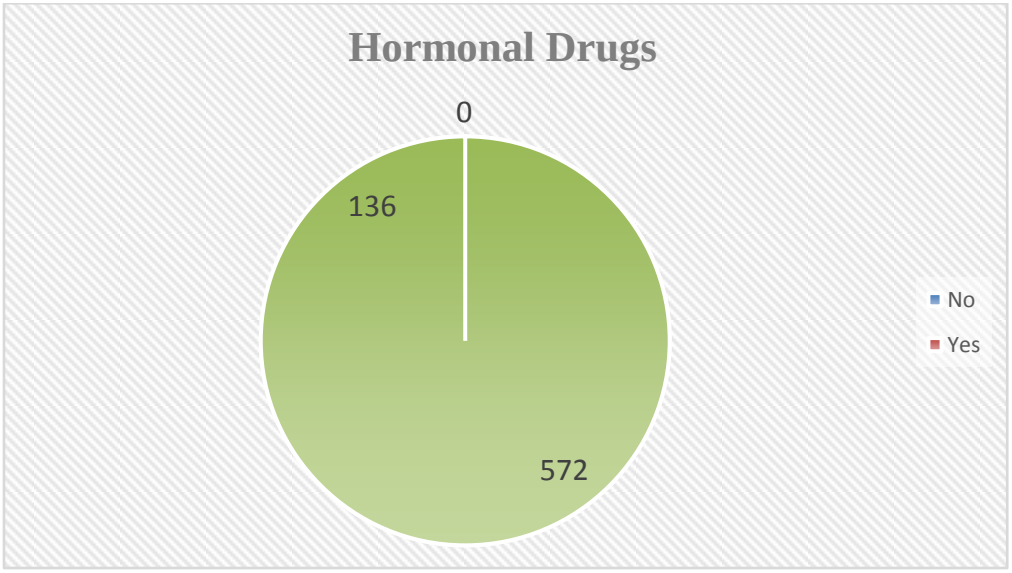

Figure 6: Usage of Hormonal Drugs in the participants of our study

Our studies showed that most patients had a BIRADS score of 1 followed by those with score of 2 and only 27 women had a score of 4(which represents suspicious abnormality), BIRADS or 'BI-RADS stands for Breast Imaging Reporting and Data System. (The score is as follows: 0- incomplete, 1-negative, 2-benign findings, 3-probably benign, 4-suspicious abnormality, 5-highly suspicious of malignancy, 6-known biopsy with proven malignancy). (Figure 7)

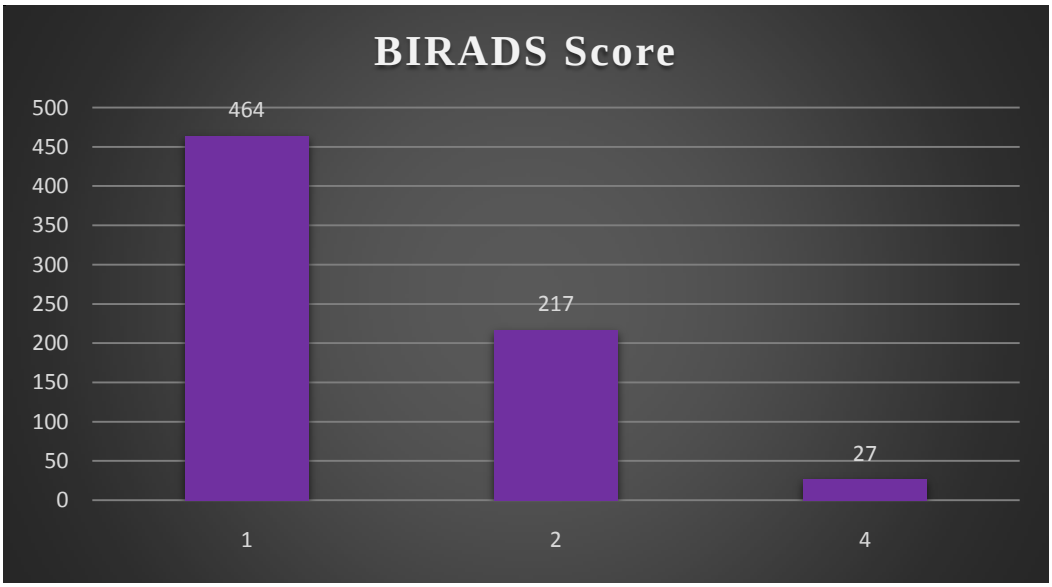

Figure 7: BIRADS Score of the participants of our study

Discussion

Aging is one of the most important risk factors of breast cancer, because the incidence of breast cancer is highly related to the increasing age. In 2016, approximately 99.3% and 71.2% of all breast cancer-associated deaths in America were reported in women over the age of 40 and 60, respectively [11]. Therefore, it is necessary to have a mammography screening ahead of time in women aged 40 or older.

Late age at first pregnancy and low parity can increase the breast cancer risk. Each additional birth decreases the risk of breast cancer by 5% or 10%, respectively [12-15].

Both endogenous and exogenous estrogens are associated with the risk of breast cancer. The endogenous estrogen is usually produced by the ovary in premenopausal women and ovariectomy can reduce the risk of breast cancer [16]. The Million Women Study in UK reported a relative risk (RR) of 1.66 between current users of HRT and those who never used it [17]. However, the risk of breast cancer has been shown to significantly decrease after two years of stopping HRT [18]. The incidence rate of breast cancer in America has decreased by approximately 7% due to the reduction in the use of HRT [19, 20].

Modern western diet contains too much fat and excess intake of fat, especially the saturated fat, is associated with mortality (RR=1.3) and poor prognosis in breast cancer patients [21, 22]. Although the relationship between smoking and breast cancer risk remains controversial, mutagens from cigarette smoke have been detected in the breast fluid from non-lactating women. The risk of breast cancer is also elevated in women who both smoke and drink (RR=1.54) [23]. Up to now, accumulating evidences demonstrate that smoking, especially at an early age, has a higher risk on breast cancer occurrence [24-27].

Breastfeeding is of particular interest for breast cancer prevention because it is a modifiable risk factor. Breastfeeding not only reduces breast cancer risk but also confers other health benefits to the mother including reduced risk for endometrial and ovarian cancers and reduced risk for chronic conditions that are also risk factors for cancer, such as hypertension and diabetes [28, 29].

Additionally, breastfeeding provides many benefits to the infant, including fewer episodes of diarrhea, ear infections, and lower respiratory infections and a lower risk of sudden infant death, diabetes, asthma, and childhood obesity (30).

Conclusion

Breast cancer is the most common cancer affecting women worldwide and is the second leading cause of cancer deaths among women. The development of breast cancer is a multi-step process involving multiple cell types, and its prevention remains challenging in the world. Early diagnosis of breast cancer is one of the best approaches to prevent this disease. In some developed countries, the 5-year relative survival rate of breast cancer patients is above 80% due to early prevention. Mammography remains the mainstay breast cancer screening and detection but magnetic resonance imaging and ultrasound have become useful diagnostic adjuncts in select patient populations.

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Compliance with Ethical Standards

Funding: This study was not funded by any institution.

Ethical approval: The names and personal details of the participants were blinded to ensure privacy.

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