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ORIGINAL ARTICLE

Epidemiological evaluation of breast masses in patients operated in Fatemi hospital of Ardebil during 2002-2012

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ABSTRACT
Breast cancer is the most common cancer among women of developing countries. In comparison with other developed countries, Iranian women are suffered from breast cancer one decade earlier. The aim of present study was to epidemiological evaluation of breast masses in patients referred to Fatemi hospital of Ardebil. The study population consisted of 190 female patients with breast masses referred for biopsy for diagnostic or surgical intervention for treatment during years 2002-2012 in surgery section of Fatemi hospital. Data were collected using patients' documents archived in hospital and recorded in the questionnaire. Data were analyzed using SPSS. T-test and chi square tests were used to compare the quantitative and qualitative variables, respectively. The age range of patients was 15-86 years old with average of 36.80 and standard deviation 15.04. The average age was 32.5 ± 16.02 and 43.4 ± 13.1 in patients with benign and malignant tumors respectively. The most of patients were up to 40 years old (47%). The maximum prevalence of benign and malignant masses was in age range 20-30 years old (46 patients) and 40 years old (54 patients), respectively. The most prevalent malignancy (54 patients, 72.9%) was invasive ductal carcinoma. Obesity, hyperlipidemia, OCP consumption were the most common risk factors for breast cancer. Epidemiologic paradigm of breast cancer in Ardebil was different from other reports which needs to other studies to better treatment.
***Keywords**: epidemiology, breast masses, breast cancer, risk factors.*

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INTRODUCTION

Nowadays, one of every six women is undertook biopsy because of breast disorders in which 75-80% of them were benign. The importance of breast masses in terms of the risk of breast cancer increases with age in these masses. The diagnosis of breast cancer in Americans has been reported 178480 cases per year in which 40460 cases die because of it [1]. With improvements of treatment and early detection of disease, mortality rate from breast cancer in the United States is significantly reduced. Therefore, knowing the risk factors is important step in preventing disease and its progression and increased survival rate. Based on recent studies it seems that our country "Iran" is one of the regions with moderate prevalence and incidence rates so that, it has increasingly rate in past years (2). According to national reports recorded in Ardabil, breast cancer is the third after esophageal and stomach cancers [3]. The importance of breast masses in terms of the risk of breast cancer increases with age in these masses [1]. Breast cancer is the most common cancer among American women and the second cause of death among women 45 to 55 years old [3]. The report of breast cancer in most of the Middle East countries is 15-25% of total cancers with lower rate in Iran and Pakistan [4]. By the way, breast cancer in Iran is most common and includes 21.14% of total malignancies among women [5,6]. In comparison with other developed countries, Iranian women are suffered from breast cancer one decade earlier [7]. Thus, by considering the prevalence and incidence rates of breast cancer and high cost treatment as well as by considering the fact that breast cancer includes young women who are generator in terms of social and financial aspects (up to 35 years old) and in case of early detection and screening by mammography, this disorder is one of the curable cancers and its importance would be more reveal than past [8]. Increased exposure to estrogen

increases breast cancer so it seems that decreased exposure to estrogen to have a protective role. Also, Factors such as increasing the number of menstrual cycles like early menarche, nulliparity and late menopause cause increases the risk. Moderate exercise and long periods of breastfeeding reduce menstrual cycles and have protective role [8]. In general, increasing age, family history, genetic factors, hormonal conditions, reproduction, exogenous hormones, diet, environmental factors and other malignancies are important risk factors. In 85% of patients with breast cancer have no identifiable risk factor so, all women should be considered at risk [9]. Breast cancer is one of the most important and controversial problems in women's health worldwide. Breast masses are common complaint of women as well as patients with diagnosed that [10]. Breast cancer at ratio 20% is one of the common cancers among women and is the first cause of death in women 40-45 years old [11,12]. The aim of present study was to epidemiological evaluation of breast masses in patients referred to Fatemi hospital of Ardebil.

MATERIALS AND METHODS

This research was a retrospective cross-sectional study. The study population consisted of 190 female patients with breast masses referred for biopsy for diagnostic or surgical intervention for treatment during years 2002-2012 in surgery section of Fatemi hospital. The way of collecting information in this study was to refer to archives recorded in surgery section and reference pathology laboratory in Fatemi hospital and obtaining the names of patients with diagnosis breast cancer or masses and referring their documents after achieving their informed consent and higher authorities' license. Patients' information included age, cause of referring to hospital, history of previous problems, history of drug consumption, family history, time spent from appearing the signs and till referring and history of radiotherapy were recorded in a questionnaire. Data were analyzed using SPSS. T-test and chi square tests were used to compare the quantitative and qualitative variables, respectively.

RESULTS

The age range of patients was 15-86 years old with average of 36.80 and standard deviation 15.04. The average age was 32.5 ± 16.02 and 43.4 ± 13.1 in patients with benign and malignant tumors respectively. There was a significant difference among patients with malignant and benign tumors in term of age. The most of patients were up to 40 years old (47%). The maximum prevalence of benign and malignant masses was in age range 20-30 years old (46 patients) and 40 years old (54 patients), respectively. The age range of patients with benign and malignant masses was differed from each other. 115 (60.5%) and 75 (39.5%) patients were suffered from benign and malignant tumors respectively. The maximum and minimum prevalence was related to fibroadenoma (75 patients, 65.2%) and ductal epithelial hyperplasia, Adenosclerosis and ductal ectasia (1 patient each, 0.86%), respectively (diagram 1). 17 patients (8.9%) were suffered from early menarche. 145 (76.3%) and 45 (23.7%) of patients were urban rural, respectively. Maximum and minimum prevalence at the time of referring was the 1st and up to 3 years respectively. The most of the patients (119 patients, 62.6%) were referred to surgery during the first year of appearing the signs. The most prevalent malignancy (54 patients, 72.9%) was invasive ductal carcinoma (table 1). Maximum and minimum prevalence was related to mass (116 patients, 61%) and fever (15 patients, 7.8%) respectively (table 2).

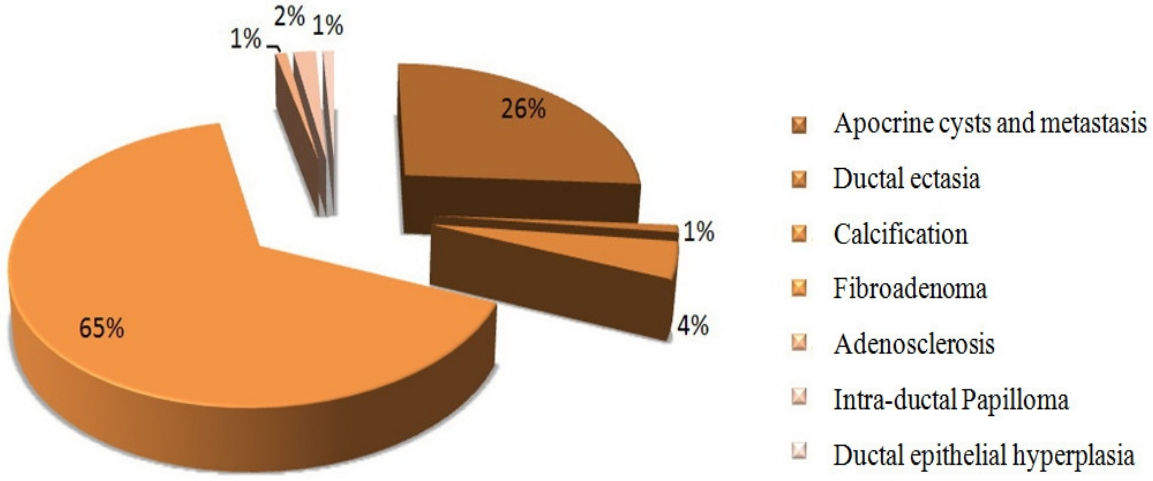

Diagram 1: prevalence rate of benign tumors in patients

Table 1: prevalence rate of malignant tumors in patients

Type of malignant tumor	Prevalence	Percent
Invasive ductal carcinoma	54	72.9
Carcinoma In Situ	3	4.05
Lobular Carcinoma In Situ	0	0
Ductal Carcinoma In Situ	3	4.05
Invasive breast carcinoma	5	6.7
Medullary carcinoma	1	1.8
Unreported	9	12.6
Total	74	100

Table 2: prevalence rate of signs observed in patients

Signs	Prevalence	Percent
Tenderness	100	52.6
Fever	15	7.8
Weight loss	20	10.5
Abnormality of skin	32	16.8
Discharge from nipple	29	15.2
Mass	116	61
Asymptomatic	9	4.7

Table 3: prevalence rate of history of previous disorders in patients

History	Prevalence	Percent
Obesity	58	30.52
Use of Alcohol	2	1.05
Diabetic Mellitus	8	4.21
Hypertension	12	6.31
Hyperlipidemia	49	25.78
Late menopause	19	10
Early menarc	17	8.94
Family History	22	11.57
Without any history	23	12.01
Missing	15	7.89

DISCUSSION AND CONCLUSION

This is research is the first retrospective study based on hospital information about the epidemiology of breast lumps in women of Ardebil province. The age range of patients was 15-86 years old with average of 36.80 which is similar with previous studies and indicating low ages of incidence in Iran [13,14]. 115 (32.5 years old age average) and 75 (43.4 years old age average) patients were suffered from benign and malignant tumors respectively. Based on it, age average in patients with benign tumor is lower than other one. Also, in assessment of type of tumor in age range, our data could be defined to less than 20 years old, 20-30 years old, 30-40 and up to 40 years old in which the maximum prevalence was related to group 20-30 years old with benign tumor. In age classification, incidence of breast cancer is increased by aging but unfortunately, as we observed this paradigm is shown in lower age groups, which is compatible with other researches. In those studies, the ageing is considered as an important risk factor (2,6,7,11,15,16). In studies carried out in Iran also educational level and socio-financial factors as well as employment are important risk factors which are more obvious in urban peoples (2,17). Based on this fact, urbanization and industrialization of societies are the risk factors for incidence of breast malignancies (18,19). Based on present study, 61% of patients were suffered from breast masses, which is different from Barton results who reported 40% (10). 31.1% of patients were referred with breast pain. Breast pain is associate with benign disorders and reported in 60% of women without pathology evidences (20). The sign was rarely associated with breast malignancies (21) and reported 1.2-15% of women referred with pain (22,23,24). Although, breast pain is usually associated with benign reasons but, should always be considered because of the possible risk of cancer. In this study, 4.7% of the patients did not any complain while, physical examination and mammography showed pathological findings which is indicating the proper breast self-examination. The Maximum prevalence was the 1st year of appearing the first signs. However, the incidence of breast cancer has increased in recent years but the rate of mortality is constant because of early detection. Thus, knowing the diagnostic methods, risk factors and educating the people

with signs and evidence of cancer and early referring to doctor after appearing the first signs are important in prevention and progression of disease. In present study, 58 (30.52%) and 49 (25.78%) of patients were suffered from obesity and hyperlipidemia respectively. In several studies carried out in Iran and other countries, the obesity and high fat diets with low exercise have been defined as breast cancer predisposing factors (2,11,25). Also, in a study use of low fat diet and high fiber such as vegetables considered as a protective effect in preventing of breast cancer (26). So that, given the diet and adjust the daily calorie based on subjects' demand as classified and compiled diet and introducing them to people of society may inform the people and reduce the incidence of breast malignancies. Early onset of the first monstrous (under 14 years old) and late onset of menopause (up to 50 years old) are associate with breast cancer (11,25) that in present study include 8.94% and 10% of total patients which is not compatible with other researches' results (27,28,29,19). In documents of 22 patients (18.6%), family history was positive, which is one of the most important risk factors of cancer [11]. Since a positive family history may be a positive family history of breast cancer, uterine, ovarian, benign breast masses, positive genetic history, (BRCA1, BRCA2) and etc. so it would require a separate review in this filed. In discussing the types of drugs used, only drugs included in this study which were used for a long time by the patients. Nowadays, OCPs are widely used because of high success in preventing of pregnancy, ease to use and control of fertility. Perhaps, the origin of the differences in opinions about the side effects of OCPs in breast cancer is due to the way of administration or different compounds that has been used at different times. Other studies also mentioned the effects of OCPs and antihypertensive drugs on incidence of breast cancer [17,26,30]. 22 patients were using nortriptyline for a several years. Because there is no data about effects of TCAs and incidence of breast cancer in Iran or world but our records in this area was interesting.

SUGGESTIONS

- Conducting studies to reveal the relationship between OCP variables, late menopause and age with disease
- Educating the women in order to correct self-examination of breast
- Tracking the patients who were not diagnosed properly at first time and are suspected to disease
- Conducting separate studies about breast cancer predisposing factors

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