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Original Research Article

Risk Factors and Drug Use in Patients with Breast Cancer

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Abstract: This study was carried out to assess the probable risk factors in patients residing in the city of Kutahya diagnosed with breast cancer, to determine the relation among them and to analyse the habits of the patients, any accompanying disease, drug use and drug-related adverse effects. The study was conducted on 45 female patients diagnosed with breast cancer who had applied to Dumlupınar University Medical Faculty Evliya Çelebi Education and Research Hospital in the city of Kutahya between 1st January 2011 and 31st December 2013. The subjects were called at their phone numbers in their files and the information was collected through face to face interview. The patients' age, gender, metastasis, appetite, smoking/drinking habits, genetic history, use of oral contraceptives, accompanying diseases, tumour size, previous treatments and their side-effects were analysed retrospectively out of their follow-up files. Descriptive statistics were conducted on the age, menstruation and menopause age and the number of children of the 45 patients with breast cancer in the city of Kütahya .The patient mean age was 59,8 (31-87 year) in cancer group, mean number of childeren was 2,73. In the study, using Eta coefficient (Coefficient of Nonlinear Relationship)(the coefficient of the relation between a qualitative variant with two categories and a variant of continuous numeric data),the relation between the tumour size and oral contraceptive, genetic, breast-feeding, accompanying disease, radiotherapy, smoking/drinking habits, metastasis and appetite change was analysed. Also, Eta coefficient was used to analyse the relation between the tumour size and the qualitative variables, which were obtained by dividing the variables of age, menopause age, menstruation age and number of children into 2 categories. Genetic (0,70), Menstruation age (0,70), Drug side effect (0,72), Number of children (0,74), High-level relationship Rank (Strong) (0,70-0,0-89) were found. We can say that our results we compared with the risk factors related to breast tumour are generally coherent with the current literature data. We think that the fact that the different results we determined other than the current risk factors of breast cancer, one of the most common cancer types in females today, might shed light to future studies.
Keywords: Breast Cancer, Drug Use, Side effect

INTRODUCTION

Breast cancer in women in the world and our country is one of the more common types of cancer [1]. 23'% of all cancer cases in women in the form of breast cancer [2]. Such as breast cancer incidence can vary from country to country, it may show regional differences among women living in the same country. According to statistical data, in Turkey, in our the eastern region of the cancer cases 20 / 100,000, while the western regions ratio is estimated to be 40-50 / 100,000 [3]. A study conducted in Turkey in 1993 to 24.1 / 100,000 in the calculated incidence of breast cancer in year 2010, 50 / 100,000 is estimated to have reached. All over the world the last 5 years, the diagnosis of breast cancer has been placed, it is stated that there are approximately 4.4 million women. The high prevalence of cancer is considered as breast cancer [4]. It is accused of genetic and environmental factors involved in the etiology of breast cancer. These factors include early menarche, late menopause, older age at childbirth, hormone replacement therapy to receive treatment, short-term breastfeeding, breast tumor family history, use of oral contraceptives, radiation exposure, smoking, as it is closely related to many factors.

Age is one of the features. The incidence of breast cancer is rare before the age of 30, shows a rapid increase in the age following the reproductive period.

According to the study of the breast cancer cases in young patients, breast cancer for women under the age of 35, it was concluded that the worse the prognosis. Breast cancer incidence will continue to increase in growth after menopause.

Age increases the risk of cancer is increasing. Most cases of women who constitute over 50 years. There is a direct relationship between breast cancer and genetic. Age seen in hereditary cancer cases occur at an earlier age [5-9].

MATERIAL AND METHOD

This study was carried Dumlupınar University Faculty of Medicine Evliya Celebi Research and Training Hospital in female patients diagnosed with breast cancer in the application. They were interviewed face to face information by calling the phone number listed in the file.

Between January 1, 2011 and December 31, 2013 who started the treatment 45 breast cancer patients were admitted study.

Patient's age, sex, metastasis, loss of appetite, smoking / alcohol use habits, genetic history, oral contraceptive use, additional diseases, tumor size, treatment and side effects were analyzed retrospectively from patients' files.

Statistical analysis

The two-category variable with a qualitative correlation coefficient between continuous variables in numeric data type "Eta coefficient" is called. In this study; Tumor size is a continuous variable and to investigate the relationship between tumor size desired, oral contraceptives, genetics, nursing, comorbid disease, radiotherapy, non-alcohol habit, metastasis and appetite are two categorized variables qualitative variables. In this case, the Eta coefficient is used to describe the relationship. In addition, age, menopause age, menstrusayo's age and number of children brought to the qualitative variables as these variables variable type divided into 2 categories to examine the relationship between tumor size was also used Eta coefficient [10, 11].

As a result, 45 patients with breast cancer, tumor size and genetics, menstruation, age, number of children is a highly significant relationship between and drug side effects, tobacco - alcohol addiction, age, radiotherapy, breast feeding, attachment disorders, menopause age, between oral contraceptives and metastasis variables that it is a moderate correlation. Breast cancer patients, between a side effects of drugs used to treat cancer patients with age is said to be a strong relationship almost 90%.

FINDINGS

Our study group receive a diagnosis of breast cancer, who were treated consisted of 45 female patients. 45 patients with breast cancer, age, menstruation, menopause age, number of children they have, descriptive statistics are given in Table 1. Age is an important factor in breast cancer [12, 13]. The average age of patients was 59.8 with breast cancer living in Kutahya. 45 women with breast cancer living in Kutahya, age greater than 45, or 45, 29 (64.5%) people. The smallest of these patients is 31 years old while the oldest was 87 years old.

Table 1: Descriptive statistics

Variables	Smallest Value	Biggest values	mean
Age	31	87	59,8
Menstruation age	11	16	12,68
Menopause age	31	56	44,77
Number of children	0	6	2,73

Other prognostic factors associated with breast cancer, age at menopause. The menopause occur after the age of 55 are considered as a risk factor for creating breast cancer. While most early menopause age 31, the most advanced menopause age 56, respectively. The average age of menopause seen in our study was found to be 44.77. After age 45 entering the menopause, the number of our patients was 29 (64.4%) was found [14]. Breastfeeding is known to be factors in reducing the risk of breast cancer. 41 patients from 45 patients with breast cancer (91.2%) nursing a baby, 4 patients did not breast feed her baby. Long-term use of oral contraceptives, and it is suggested that a significant relationship between breast cancer (Table 2, 3). When questioned history of oral contraceptives, in 18 patients (40%), oral contraceptive use was found [15, 16]. In the study group, 18 (40%) patients were found to receive radiotherapy.

Tumor size at the rate of 72% with drug side effects, strong (high) level is said to be in a relationship.

Table 2: The relationship between tumor size and drug side effects

		Drugsideeffect
Tumor size	Etacoefficient	0,72*

*: P-values <0.05. Eta coefficient is statistically significant with respect to a 5% margin of error.

Table 3: Relationship Degree Middle Level Ones (0,40-0,69)

		Tumor size
Breastfeeding	Eta Coefficient	0.60*
Tobacco, alcohol addiction		0.62*
Age		0.62*
Radioteraphy		0.63*
Menauposeage		0.67*
Oral contraceptif		0.68*
Additional Disease		0.68*
Metastasis		0.68*

Table 4: Relationship Degree strong Level Ones (0,70-0,0-89)

		Tumor size
Genetic	Eta Coefficient	0.70*
Menstrual Age		0.70*
Drugsideeffect		0.72*
Number of Children		0.74*

Table 5: Relationship between age and drug side effect

		Drug side effect
Age	Eta Coefficient	0.89*

*: P-values <0.05. Eta coefficient is statistically significant with respect to a 5% margin of error

Table 6: Variables and Levels

Variable	**Variable level**	**Additional patient count(n)**	**%**
Age	1.0-54	20	44.4
	2.≥55	25	55.6
Menstrual Age	1.0-12	26	57.7
	2. ≥13	19	42.3
Menauposeage	1.0-44	16	35.5
	2. ≥45	29	64.5
Numbet of children	1.0-2	21	46.6
	2. ≥3	24	53.4
Metastasis	0.non	36	80
	1.positive	9	20
Tobacco-alcholaddiction	0.non	36	80
	1.ositive	9	20
Radiotherapy	0.non radiotherapy	27	60
	1.radioteraphy	18	40
Oral contraceptif	0.non	27	60
	1.used	18	40
Breastfeeding	0.non breastfeeding	4	8.8
	1.breast feeding	41	91.2
Genetic	0.non	31	68.8
	1.positive	14	31.2
Drugsideeefect	0.non	18	40
	1.positive	27	60
Additionaldisease	0.non	14	31.2
	1.positive	31	68.8

DISCUSSION

Breast cancer incidence is rare before the age of 30, the age of the following shows a rapid increase in the reproductive years. This increase continues to rise after menopause with a slow slope [17]. According to research, 85-year-old in one of every nine women is expected to develop breast cancer [18, 19]. 87-year-old breast cancer were included in our study we found accordance with the results of research done before. Breast cancer clinic as long, a heterogeneous natural course marks. Nine of 45 breast cancer patient (20%) had metastasis, while no evidence of metastasis for 36 patient. In the study group, tumor size between metastasis seen were associated moderately like (68%). Clinical history of breast cancer is variable and survival time of untreated patients with the same clinical stage

of the disease, varies between a few decades from a few months to heal is to define the true meaning of power [20]. For the breast cancer is the wrong approach to think of as a single disease. As the variability between individuals, it can vary according to the tumor's pathological character, as a whole with a view to possible risk factors are extremely important. In all diseases prevailing, early diagnosis is important in breast tumor. Long life is also associated with early diagnosis, tumor structure and the degree of malignancy [21]. Depending on the medication, side effects / adverse events is a situation that is expected in almost every treatment. In traditional cancer treatment, the less the effect of drugs, the development of drug resistance, drug toxicity are very common situations [22, 23]. However, when it comes to cancer treatment has come to the fore in this case more. When we considered the risk-benefit ratio, potential adverse effects that may develop treatments already accepted from the beginning [24]. Indeed, our study results with an increase in tumor size by 89% as a strong understanding of the side effects incidence (high) level there is a relationship is extremely important. Accurate and early diagnosis is of course important, but the most important element of success in treatment: the right dose of the drug, the right route, right patient, using the correct indication; that means rational used [25]. Patients in the use of our medicines, compliance issues on behalf of the living, it is necessary to be informed enough about the use of drugs. Drug leave itself, adverse of drug / side effects induced adherence problems (diarrhea, nausea, vomiting), as undesirable by such cessation medication when faced to encounter undesirable breast drug in cancer patients and behavior to adapt to the treatment given is extremely important [26]. When viewed from the window of the foundations of rational use of drugs taken in Nairobi in 1987, breast cancer and studies are built to our current information for rational drug use will be accessible to a much richer and much better treatment in points [27].

One of the factors associated with breast cancer at age entering menstruation, although the onset of menstruation at an early age if it is seen, especially before the age of 12 as a risk factor to be considered. In our study, the mean age of onset of menstruation was found to be 12.68. While most small menstruation age 11 and largest menstruation age is 16 [28]. In the study, patients who rate our menstruation before age 12 42.3% (19 patients) was found. There is also an inverse ratio between the number of births in breast cancer [29]. In our study, there are patients who do not have any children among 45 individuals with breast cancer, there are also individuals with a maximum of 6 children. 24 female patients (53.4%) have 3 and more than 3 children, and between tumor size and number of children association ETA was higher coefficient (0.74).

Genetic inheritance is an important factor for prognosis for breast cancer. The relationship between family history of breast cancer has been proven clearly with the case-control and cohort studies [7, 30]. In cross-sectional studies conducted in the community, it was found to be 5-10% of breast cancer in the women's mother or sister. In the presence of genetic, cancer occurs at an earlier age [5, 8, 9]. In our study, the proportion of patients with positive genetic history of 14 patients (31.2%) was found. Smoking is known to be one of the causes of many cancers. However, the relationship between breast cancer has not been fully clarified, passive exposure to tobacco smoke, breast cancer is thought to be a relationship between the development. When tobacco and alcohol habits of our patients studied nine (20%) it was also identified in tobacco and alcohol habits. There was no such a habit of 36 people [31]. Our study was the starting point in planning this research is to determine what level of potential risk factors. The risk factors associated with tumor size, side effects and drug use were seen as a remarkable factor. Given the side effects of drugs used to treat breast cancer patients in 27`s (60%) adverse events were observed It was observed in 18 patients non adverse effect. Following are the main side effects; nausea, abdominal pain, constipation, fatigue, fatty liver, diarrhea, vomiting, hair loss, constipation, restlessness, fatigue, nail and skin rashes, vertigo, urinary bleeding, drowsiness, numbness in the fingers, can be listed as impaired vision. Patients had been diagnosed with breast cancer when accompanied by other diseases were examined in 31 patients (68.8%) were with breast cancer, diabetes, hypertension, panic attacks, lung metastasis findings, nephrectomy, thyroid, cholecystitis, left mastectomy, heart failure, hypercholesterolemic, hearing problems, neuropathic pain, as it was also observed that additional diseases. With regard to the evaluation of our results as compared with tumor size, medium and high levels we have achieved varying of the results Eta coefficient. Results Table 2,3,4,5,6 'is given. Breast cancer patients, survival was affected by regional and environmental differences and genetic variations [32].

CONCLUSION

For treating cancer, Pharmacoeconomics, pharmacovigilance, pharmacoecology, pharmacoepidemiology, pharmacogenetics is directly related to all the sub-discipline of pharmacology mainly. The patient information and raise awareness about the disease and medication are urgently needed. Increasing the special education program for rational drug use disorders, health care is a as a result, 45 patients with breast cancer, tumor size and genetics, menstruation, age, number of children they have, appetite, in that relationship at a high level, tobacco and alcohol habits, age, radiotherapy, breast-feeding variables, in that there is a moderate correlation and additional diseases, menopause age, said to be an association between high levels of oral contraceptives and metastasis almost variables. Missed opportunity for evaluation during the presentation of important and

necessary element. Between breast cancer patients the ages and drugs side effects used for disease, nearly 90%, to have a strong relationship.

Breast cancer is a cancer arising from multifactorial influences. Early diagnosis is valid for all diseases and begin early treatment is vital for breast cancer.

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