



The Evaluation of a Special Clinical Series: Breast Cancer in Breastfeeding Mothers and Delay in Diagnosis

Özel Bir Klinik Serinin İrdelenmesi: Emziren Annede Meme Kanseri, Tanıda Gecikme

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ABSTRACT

Objective: We aimed to investigate lactating mothers who were admitted to our breast polyclinic and diagnosed as breast cancer.

Materials and Methods: Ten lactating mothers with breast cancer from 112 breast cancer patients among 2380 patients admitted to our breast diseases polyclinic were evaluated retrospectively.

Results: Ten of 112 breast cancer patients were lactating women. The mean age of those patients was 33.2 (28-39) years. The mean lactating period was 8.4 months (5-12 months). The average number of children of the patients was two (1-3 child per patient). The results of the tru-cut biopsy were invasive ductal carcinoma in all patients. All patients were triple negative in regard to receptors, except for one, in whom oestrogen and c-erbB2 receptors were positive, whereas the progesterone receptor was negative. Two of the patients were in follow up due to a galactocele for three months. Four patients had multicentric disease in the same breast. Bone metastasis in three, left supraclavicular lymph node metastasis in two and locally advanced breast carcinoma in one patient were detected. Three patients underwent modified radical mastectomy, one patient was given neoadjuvant treatment, however the remaining six patients were given adjuvant oncological treatment.

Conclusion: The diagnosis of breast carcinoma in lactating mother is delayed and therefore, prognosis as well as mortality are negatively influenced.

Key words: Breastfeeding, breast cancer, lactation

ÖZET

Amaç: Emziren annede meme kanseri olasılığını göz ardı etmeden meme polikliniğimize başvuran ve meme kanseri tanısı alan emziren annelerimizi inceleyerek sunmayı amaçladık.

Yöntem ve Gereçler: Son bir yılda meme polikliniğimize başvuran 2380 hastadan tanı almış 112 meme kanseri vakasından çocuğunu emzirmekte olan 10 anne retrospektif olarak incelendi.

Bulgular: Tanı almış 112 meme kanseri hastasından 10'u çocuğunu halen emzirmekte olan annelerdi. Bu hastaların ortalama yaşı 33,2 (28-39) yıl idi. Ortalama 8,4 aydır (5-12 ay) emziriyorlardı. Bu hastaların ortalama iki (1-3) çocukları vardı. Hepsinin tru-cut biyopsi sonuçları invaziv duktal kanser olarak gelmişti. Sadece bir hastada estrogen reseptör (+), progesteron (-) ve c-erbB2 (+++) idi. Diğerlerinde tüm reseptörler negatif idi (triple negatif). Hastalardan ikisi galaktosel tanısı ile üç aydır takip edilmekte idi. Aynı memede birden fazla tümör odağı olan dört hasta mevcuttu. Hastalardan üçünde kemik metastazı, ikisinde sol supraclaviküler lenf nodu metastazı, üçünde aksiller lenf nodu metastazı ve birinde lokal ileri tümör mevcuttu. Üç hastaya modifiye radikal mastektomi uygulandı. Bir hasta neoadjuvan onkolojik tedaviye verildi ve yedi hastaya adjuvan onkolojik tedavi önerildi.

Sonuç: Emziren annede meme kanseri teşhisi oldukça geç olmakta ve bu da sağkalımı ve mortaliteyi olumsuz yönde etkilemektedir.

Anahtar sözcükler: Emzirme, meme kanseri, laktasyon

Introduction

Altered breast structure caused by lactation physiology delays the diagnosis of breast masses suspected of malignancy in breastfeeding mothers by affecting both the physical examination findings and imaging modalities.

Cancer diagnosis without any delay necessitates evaluation of the management of diagnosis and treatment in lactating mothers. Understanding the lactating breast as well as the prognosis of those patients in addition to the pitfalls in their managements are very different from our expectations.

There has not been any study about 'breast cancer during lactation' in Turkey previously, however breastfeeding is a good prognostic factor for breast cancer according to a study carried out by Kuru et al. (1). Although lactation presents as a protective factor against malignancy, delayed diagnosis because of breastfeeding is a very remarkable entity for clinicians. Breastfeeding has been globally accepted as the best nutritional method by the World Health Organisation and scientific associations. Breastfeeding is the most appropriate and unique nutritional method for healthy growth and development of babies. Even childhood malignancies have been claimed to be prevented in children who had been breastfed (2). Decrease in the volume and duration of postpartum bleeding in addition to

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the decreased risk of premenopausal breast an ovarian cancer has also been reported (3, 4).

Breast cancer has been accepted as the most common cancer type among female cancers through out the world. The incidence of breast cancer presents itself in different aspects in different geographical areas in Turkey because of geographic, social and cultural differences. The incidence of breast cancer doubles in the western parts of Turkey (50/100000) when compared to the eastern cities (20/100000) (5).

The American Cancer Society has declared that breastfeeding, medium to high grade physical activity and maintenance of healthy weight helped to decrease the risk of cancer development (6) Although previous systemic studies cannot define the relationship between the risk of breast cancer and breastfeeding, breastfeeding has been claimed to decrease the risk of breast cancer (7-9).

Recent epidemiological studies regarding the relationship of breast cancer and breastfeeding have been evaluated in two extensive meta-analyses. Every breastfeeding period lasting at least 12 months has been found to decrease the risk of breast cancer by 4.3% according to a metaanalysis evaluating 47 epidemiological studies with 96973 controls and 50302 patients with breast cancer (10, 11). Another metaanalytic evaluation of 80 epidemiological studies including 37 case-control and 4 cohort scientific papers carried out by Bernio et al. showed that every breastfeeding period lasting at least 5 months had decreased the risk of breast cancer by 2%. Recently, Carmo França-Botelho et al. (12) have proposed that mothers should be informed that breastmilk with its complex components is the most ideal food for babies and breastfeeding decreases the risk of breast cancer.

In five consecutive studies, it was reported that women with a breastfeeding history had a lower risk of breast cancer when compared to females who avoided breastfeeding. The number of children who had given birth, continuous breastfeeding and duration of breastfeeding were also studied as to whether they had had any possible effect on breast cancer (13-18). A decreased risk of breast cancer by 38% in women who had been continuously breastfeeding in addition to a remarkable decrease with longer lasting lactation were reported by Yoo et al (14). Yao-hua et al. (15) reported that breastfeeding lasting longer than 25 months decreased the risk of breast cancer by 40%.

A report from Japan also confirmed that breastfeeding had decreased the risk of breast cancer by a large extent (18). In addition to many health advantages for babies, breastfeeding also prevents many severe diseases such as breast cancer in mothers (19).

It is obvious that breastfeeding decreases the risk of breast cancer. However, it is also true that the diagnosis of breast cancer in lactating women is delayed, which negatively influences the life expectancy and mortality dramatically. The sensitivities of the diagnostic modalities decrease in lactating women who had presented to the outpatient polyclinics because of breast masses. Dense breast tissue because of breastfeeding leads to difficult diagnosis of a mass by palpation. Galactocele is the first disease that comes to our mind in case of a palpable mass in a lactating breast (20). Breast cancer in a lactating mother presents a subgroup especially with negative hormone receptors, which shows that their prognosis would be dramatically worse (21).

Materials and Methods

A retrospective evaluation of 10 breastfeeding mothers with concomitant breast cancer out of 112 patients with breast cancer among 2380 patients who had applied to our outpatient breast polyclinic was carried out in the previous year. Investigation of whether a breast mass is multicentric or multifocal in addition to its receptor status and pathology reports was carried out. Numerical evaluation instead of statistical analysis was carried out since the number of the patients was not enough for statistics. International guidelines were used for appropriate investigations. Although the treatment modalities change for every particular patient, informed consents were obtained from the patients to be able to use the findings in the scientific studies. Patients' characteristics were listed for every individual patient according to the point of view of each physician who had initially evaluated the patient. Possible pitfalls during the management of diagnosis and treatment were evaluated.

Results

Breastfeeding mothers constituted a subgroup of 10 out of 112 patients with breast cancer. The mean age of the patients was 33.2 (28-39) years. The mean duration of breastfeeding was 8.4 months (range: 5-12 months). The mean number of the children of the patients was two (range: 1-3). Invasive ductal carcinoma was the diagnosis according to tru-cut biopsy. All patients were triple negative except for one

Table 1. The distribution of the patients according to age, duration of breastfeeding, number of births given, biopsy results and receptor status

Patients	Age	Duration of breastfeeding	Number of births given	Biopsy results	Oestrogen receptors	Progesteron receptors	Cerb
1	37	5 months	3	invazive ductal cancer	-	-	-
2	28	10 months	2	invazive ductal cancer	-	-	-
3	30	7 months	3	invazive ductal cancer	+	-	+++
4	32	8 months	2	invazive ductal cancer	-	-	-
5	39	6 months	1	invazive ductal cancer	-	-	-
6	38	9 months	1	invazive duktal cancer	-	-	-
7	27	12 months	1	invazive ductal cancer	-	-	-
8	30	8 months	2	invazive ductal cancer	-	-	-
9	33	11 months	2	invazive ductal cancer	-	-	-
10	38	8 months	3	invazive ductal cancer	-	-	-

patient in whom oestrogen and c-erbB2 receptors positivity had been detected (Table 1). Two of the patients had been following up with the diagnosis of galactocele for 3 months which delayed the underlying diagnosis of malignancy. Four patients had more than one tumor in the same breast. Bone metastasis in 3, left supraclavicular lymph node involvement in 2, axillary lymph node metastasis in 3 and locally advanced tumor in 1 patient were detected. Three patients underwent modified radical mastectomy. While neoadjuvant oncologic treatment was employed in one patient prior to surgery because of locally advanced tumor, the remaining 6 patients were recommended to be managed by adjuvant oncologic treatment.

Discussion and Conclusions

The understanding of the difference between 'breast cancer during breastfeeding' and the relationship of breast cancer and presence of a personal history of breastfeeding was aimed which would be helpful to the related literature. The subgroup which we had presented, has usually been omitted while the preventive effect of breastfeeding on breast cancer has been intensively studied in the literature. Although breast cancer is a well-known entity by general surgeons, 'breast cancer during breastfeeding' as a less well-known subgroup in our study was thought to increase the knowledge and the enlighten the subject.

The preventive effect of lactation on cancer has been claimed in some studies. History of breastfeeding is also closely related and dependent to factors such as parity and mother's age during the first or the present pregnancy. Every period of breastfeeding lasting at least 12 months decreases the risk of breast cancer around 5% according to data of the international observational studies (10, 11). Studies obviously show that there has been an inverse proportion between breastfeeding and risk of breast cancer. Moreover; risk of breast cancer decreases more in mothers who lactate for a long period when compared to mothers with shorter duration of breastfeeding history (1).

Delayed diagnosis in lactating women negatively influences life expectancy and mortality. All patients in our series had axillary lymph node metastasis at the time of diagnosis. In addition to bone metastasis in 3, left supraclavicular lymph node metastasis in 2 and locally advanced tumor in 1 patient. The reason of high stage status of cancer in our patients is the delay in the diagnosis, but pregnancy or lactation. Not only structural changes within the lactating breast but also the mental relaxation of the mother and physician caused by the awareness of the preventive effect of breastfeeding against cancer can be another reason of delay of diagnosis since two patients in the series who had been followed up as galactocele despite hidden breast cancer is the real evidence of that entity. However, such benign conditions should not conversely divert the diagnostic ability of physicians and cancer should be the first diagnostic possibility to be ruled out. All patients in our series had invasive ductal cancer. In regard to receptor status, all patients were triple negative except for one patient, in whom oestrogen and c-erbB2 receptors were positive. Negativity of hormone receptors is a clue that the progression of the disease can be fast and prognosis would be worse.

Risk of breast cancer is almost two times more in mothers who had no history of breastfeeding when compared to mothers with history of breastfeeding. However, the presence of a history of breastfeeding and the delayed diagnosis of breast cancer during lactation are very different entities from each other. While development of breast cancer during lactation presents a dramatical risk because of delayed diagnosis, lactation prevents breast cancer and is in favour of mother's health

in the future. Lactation ends up with delayed diagnosis and bad prognosis (20, 21). Therefore, the possibility of breast cancer in lactating mother should never be ruled out and the patients with breast masses must be evaluated independently from breastfeeding in the light of the recent guidelines.

In conclusion, the physician should not transform the breastfeeding entity, which is preventive against cancer, to a factor which delays the diagnosis of breast cancer.

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