

Breast diseases and breast cancer screening in pregnant and puerperal in Şanlıurfa province

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ABSTRACT

Objective: Pregnancy-associated breast cancer is breast cancer that occurs during pregnancy or within 1 year after birth. It occurs in one out of 3000-10000 pregnancies and is the most common cancer occurring during pregnancy and the postpartum period. It was aimed to reveal the incidence of pregnancy-associated breast cancer in pregnant and lactating patients in a city with high fertility rates.

Material and Methods: Patients who presented with breast pain and palpable mass in the breast in the first year of pregnancy and lactation between December 2018 and November 2020 were prospectively recorded. The 314 patients were included in the study.

Results: The mean age of the patients was 28.7 ± 6.1 years. 258 (82.1%) of the patients were Turkish and 56 (17.8%) were Syrian nationals. The most common complaints were pain in the breast, palpable mass, redness, and breast swelling. A palpable mass in the breast was detected in 39 (12.4%) patients. As a result of the examinations and tests performed in both patients, a diagnosis of malignancy was made.

Conclusion: Breast cancer risk increases in pregnant and breastfeeding patients. To reduce the incidence of breast cancer, it is important to perform a breast examination by a physician before or at the beginning of pregnancy and breast self-examination. From the moment of diagnosis, general surgery, obstetrics and oncology clinics should be followed with a multidisciplinary approach.

Keywords: Breast cancer, pregnancy, Lactation

INTRODUCTION

Many malignant and benign diseases can occur during pregnancy. Pregnancy-associated breast cancer (PABC) is breast cancer that occurs during pregnancy or within 1 year after birth (1). PABC occurs in one out of 3000-10000 pregnancies, and is the most common cancer occurring during pregnancy and the postpartum period (2).

The average incidence age is 32-34. Although it is more common in developed countries, its incidence has increased in the last 30 years. 10% of breast cancers under the age of 40 are pregnancy-related breast cancer. The incidence of breast cancer increases with age. Breast cancer is 2-3 times higher in patients who have their first pregnancy over the age of 30 compared to those under 20. Nowadays, an increase in the incidence is likely with the increase in the age of conception. No difference was found in terms of frequency compared to trimesters during pregnancy. However, GIMT is diagnosed at a higher rate during breastfeeding (3). The effect of hormones on the development of breast cancer is known. These hormones have proliferating effects on the glandular and ductal tissues of the breast. In addition, estrogen and prolactin are known to increase breast cancer growth. In addition, it is known that the increase in growth hormone and corticosteroid concentrations accelerates the spread of the tumor by decreasing immunity in animal experiments (4).

Breast examination during pregnancy is difficult due to physiological changes. After a detailed physical examination, ultrasonography (USG) is the first method to be used in diagnosis. Mammography can also be done by protecting the baby with a lead apron. Oblique shooting should be done first, and if it is not enough, it should be taken from other directions. Milk should be drained from the breast before shooting.

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The differential diagnosis includes lactational adenoma, fibroadenoma, fibrocystic change, galactocele and abscess. Trucut biopsy is 90% diagnostic. Pregnant patients with breast cancer have similar clinicopathological characteristics to those who are not, and yield similar survival results with non-pregnant patients at the same stage (3). Although the idea of termination of pregnancy in patients diagnosed with breast cancer has been defended for many years, it is now outdated. GIMT treatment aims to provide local control of the disease and to prevent systemic metastases, as in non-pregnant patients. In the treatment planning, the fetus should be considered as an individual and protective measures should definitely be included. The stage of the disease and the week of gestation are important criteria to be considered in treatment management. Treatment should be planned individually for each patient. In this study, we aimed to reveal the incidence of PABC in pregnant and lactating patients who applied to the general surgery clinic in a city such as Sanliurfa where the fertility rate is high.

MATERIAL AND METHODS

Study Design and Patients: Patients who were admitted to the general surgery outpatient clinic of Şanlıurfa Training and Research Hospital between December 2018 and November 2020 with complaints of breast pain and palpable mass in the breast during the first year of pregnancy and lactation were recorded prospectively. The study was conducted in accordance with the Declaration of Helsinki. Ethics committee approval was obtained for the study (HRÜ / 19.03.42 decision). Between these dates, 314 patients were examined in our outpatient clinic.

RESULTS

A total of 314 patients who met the study criteria were included in the study. The mean age of the patients was 28.7 ± 6.1 years. 258 (82.1%) of the patients were Turkish and 56 (17.8%) were Syrian nationals (Table-1).

Table 1: The demographic characteristics of the patients.

Variable	N	(%)
Age (year) (median)	28.7 years	
National	Turkish	258 82.1
	Syrian	56 17.8
Smoking	29	9.2
Pregnant	66	21
Breastfeeding period	248	78.9
Children of patients (median)	3.5	

When the patients were examined in terms of complaints of presentation, 96 (30.5%) patients had pain in the right breast, 104 (33.1%) patients had left breast pain, 32 (10.1%) had bilateral breast pain, 33 (10.5%) patients had breast pain and palpable mass, 9 (2.8%), pain and redness in the breast in 22 (7%) patients, swelling in the breast in 22 (7%) patients, nipple retraction, cracking and bloody nipple discharge in 4 (1.2%) patients, size difference in the breast in 2 (0.6%) patients, It was observed that 12 (3.8%) patients had swelling and pain in the armpit (Table-2).

Table 2: Application complaints of patients

Variable	N	(%)
Right breast pain	96	30.5
Left breast pain	104	33.1
Bilateral breast pain	32	10.1
Pain and palpable mass	33	10.5
Pain and redness	9	2.8
Swelling	22	7
Axillary pain and swelling	12	3.8
Other	6	1.9
Total	314	100

The 29 (9.2%) patients were smoking, alcohol use was not observed. In the anamnesis, 11 (3.5%) patients had a family history of breast ca It was observed that 66 (21%) of the patients were pregnant and 248 (78.9%) were in the breastfeeding period. It was observed that 89 (28.3%) patients were in the first 3 months of breastfeeding, and 42 (13.3%) of these patients were in the first one-month postpartum period. The average number of children of the patients was 3.5 ± 2.2 (min: 0- max: 11). When examination findings were examined, normal breast examination in 172 (54.7%) patients, fullness in the breast in 35 (11.1%) patients, a palpable mass in the breast in 39 (12.4%) patients, increased warmth and redness in the breast in 22 (7%) patients. and tenderness, nipple crack in 11 (3.5%) patients, axillary lymphadenopathy in 7 (2.2%) patients, and accessory breast in 4 (1.2%) patients (Table-3).

Table 3: Physical examination findings

Variable	N	(%)
Normal physical examination	172	54.7
Fullness	35	11.1
Palpable mass	39	12.4
Redness and sensitivity	22	7
Nipple crack	11	3.5
Other	35	11.1
Total	314	100

In the radiological examinations of the patients, 163 (51.9%) patients had normal breast USG findings, 83 (26.4%) patients had dilated ducts, 5 (1.5%) patients had galactocele? the lesion, 26 (8.2%) patients with benign breast lesions such as cyst, fibroadenoma, lipoma, 16 (5%) patients with edematous breast, mastitis? Lesion, fluid collection in 5 (1.5%) patients abscess? lesions, 5 (1.5%) patients had accessory breasts, 9 (2.8%) patients had axillary reactive lymph nodes, and 2 (0.6%) patients had lesions with a suspicion of solid malignancy (Table-4). Mammography was performed in 2 patients and no finding in favor of malignancy was observed. Invasive ductal carcinoma was observed as a result of tru-cut biopsy of the patients. Breast-conserving surgery + Sentinel lymph node sampling was performed on the patient who was pregnant in the second trimester. The patient received chemotherapy from the medical oncology clinic afterwards, and his radiotherapy was postponed until after birth. Breast-conserving surgery + Sentinel lymph node sampling was performed in the other patient who was breastfeeding. After surgery, chemotherapy and radiotherapy was planned for the patient by the medical oncology clinic.

Table 4: Ultrasonography Findings

Variable	N	(%)
Normal breast USG	163	51.9
Dilated ducts	83	26.4
Cyst, fibroadenoma etc.	26	8.2
Galactocele	5	1.5
Mastitis	16	5
Abscess and loculation	5	1.5
Solid mass lesion (Malignancy?)	2	0.6
Total	314	100

DISCUSSION

During pregnancy and lactation, dramatic physiological changes occur in the breast with the effect of the circulating hormones estrogen, progesterone and prolactin. Estrogen and prolactin are known to increase breast cancer growth (5). Physiological changes such as increased density, increased volume, thickening of the tissue, hypervascularity and congestion are observed in the breast. 90% of the masses during pregnancy and lactation are diagnosed by self-examination. Every mass exceeding 2–4 weeks should be investigated. 80% of the masses during pregnancy and lactation are benign. 92.8% of the masses detected in our study were found benign.

As the gestational week progresses, breast examination becomes difficult, if the mass is detected in the first months of pregnancy, close follow-up is recommended because as the pregnancy progresses, it may be confused with the physiological stiffness that develops due to pregnancy (6). Therefore, breast examination should be the first step in determining GIMT. The best time for breast examination is the first trimester, and it is recommended that the basic breast examination be performed at the prenatal visit, if possible (7).

When a mass is detected in the breast during pregnancy or lactation, ultrasonography is recommended as the first imaging method. Ultrasonography can show simple cysts, galactoceles and lymph nodes in the breast.

If ultrasonography shows a solid mass, biopsy should be done. If the biopsy result is malignant, mammography can be performed on the patient by taking necessary measures (6, 8). Examinations were performed gradually according to the risk of malignancy.

The first goal of treatment in pregnant patients with breast cancer is to control the disease and prevent metastasis. Treatment should be planned according to the week of gestation, the stage of the disease, and the condition of the patient and fetus (9).

The risk of metastasis of breast cancer increases with hormonal effects during pregnancy (4). Surgery is the first treatment possible in PABC treatment, and it is safe during pregnancy (10). The treatment is similar to the protocol in non-pregnant patients, delay in treatment is risky in terms of metastasis. Chemotherapy to the mother during pregnancy should be done by considering the balance between the risk of the fetus and the prognosis of the disease. Chemotherapy and radiotherapy have the risk of teratogenicity and adverse effects on fetal development. Therefore, if possible, radiotherapy should be postponed until after birth.

Modification of standard chemotherapy for the healthy baby can worsen the prognosis. It has been reported that after the first trimester of chemotherapy, pregnancy resulted in 95% normal live birth and morbidity was low (11). Surgical treatment was applied to patients with breast cancer. Both patients received chemotherapy. Radiotherapy of the pregnant patient was postponed until after delivery. Pregnancy negatively affects the prognosis of breast cancer. Compared with non-pregnant women in the same age group, the 4-year prognosis of PABC is worse (12).

In 73.8% of the patients' application complaints, the complaint of breast pain is remarkable. Breast examination was found to be normal in 54.7% of the patients. In the breast USG examination, 163 (51.9%) patients were also normal. Am I breast cancer in women with breast pain? It draws our attention that consulting a doctor is too much for fear. Self-examination of the person is important for breast cancer.

CONCLUSION

As a result, the risk of breast cancer increases, especially in pregnant and breastfeeding patients. In order to reduce the incidence of breast cancer, it is important to perform a breast examination by a physician before or at the beginning of pregnancy and breast self-examination. From the moment of diagnosis, general surgery, obstetrics and oncology clinics should be followed with a multidisciplinary approach.

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