



Management of COVID-19 Infection and Midwifery Care of a Woman with Breast Cancer - A Case Report

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Abstract

Breast cancer is one of the most common types of cancer in women and its incidence in pregnancy is 1/3000. After the emergence of the COVID-19 pandemic, it has created a high risk factor for cancer patients as well as affecting the society. The situation is similar in the process of breast cancer. Despite the fact that cancer patients are risk factors, their follow-up and follow-up will not be interrupted, which will allow them to maintain their current status. The prolongation of the treatment period of the patients complicates the process they are in. In this case, the follow-up period of the patient who was diagnosed with breast cancer in the third trimester of his second pregnancy during the COVID-19 period was discussed. The frequency of follow-up during the postpartum COVID-19 period of the case decreased, and therefore, recurrence was experienced. In cases such as disasters and pandemics, cancer patients should be supported in terms of both physical and mental health. During the follow-up process, patients should be guided in their public health follow-ups, and the frequency of examinations and follow-up processes should be reminded. Midwife-assisted care should be provided during these follow-ups.

INTRODUCTION

Breast cancer is the most common cancer type in women worldwide (Aydın Doğan & Güdücü, 2021; Soran, Gimbel, & Diego, 2020). There are many follow-up and treatment options in breast cancer treatment, including chemotherapy, radiotherapy, and surgical operations (Aydın Doğan & Güdücü, 2021; Soran et al., 2020). Treatment and follow-up are planned according to the clinical course of breast cancer (Soran et al., 2020). The new type of coronavirus (SARS-COV-2/COVID-19), which emerged in December 2019, is a pathogen with

high contagiousness in the human population (Organization, 2020; Vanni et al., 2020). Due to the increase in the transmission rate with COVID-19 infection, it has been declared a pandemic by the World Health Organization (Cen, Shiao, Adams, Schnabel, & Guth, 2021; Organization, 2020). While the pandemic affected the whole world, it also changed the order of the world. In this process, many clinics in hospitals have been transformed into pandemic services, and the clinical course of the patients has changed (Cen et al., 2021). Cancer treatment clinics and cancer patients

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were also affected by this clinical course. Cancer patients were among the risk groups in the COVID-19 pandemic (Aydın Doğan & Güdücü, 2021; Cen et al., 2021; Soran et al., 2020). All cancer patients' treatment and follow-up plans, including breast cancer patients, have changed in the pandemic (Cen et al., 2021; Soran et al., 2020). In this process, the diagnosis processes of newly diagnosed breast cancer patients have changed and prolonged. The treatment process of women whose diagnosis is uncertain has also been prolonged. Postponement of chemotherapy treatments, inability to perform surgical operations, and decreased frequency of follow-up in normal controls in cases with old diagnosis caused recurrences (Aydın Doğan & Güdücü, 2021; Cen et al., 2021; Soran et al., 2020; Vanni et al., 2020). Public health follow-ups have a great role in breast cancer screening, treatment and follow-up. Public health follow-ups are inexpensive and easy-to-apply methods in the diagnosis and treatment of breast cancer. Increasing awareness of early diagnosis behaviors and performing these behaviors regularly are among the best prevention methods (Bulut, Oğuzöncül, & Kara, n.d.; Ersin & Bahar, 2012; Fadhila, Kuswardinah, & Rahayu, 2018; Torkmandi, Pourrahimi, Afshar, Fayazi, &

Abdi, 2021). Midwives, nurses and public health professionals are the main drivers of public health education programs within the system (Ersin & Bahar, 2012). Early detection has been shown to reduce breast cancer by 20% (Fadhila et al., 2018; Septiani & Suara, 2013). The fact that hospitals have pandemic services during the pandemic period has increased the burden of follow-up and follow-up in public health centers in cancer screenings. Pregnancy and postpartum procedures in public health centers during the pandemic period have enabled the early detection of complications (Aydın Doğan & Güdücü, 2021). Social care provided in public health centers, in addition to early detection, has been demonstrated to minimize the prevalence of postpartum depression in mothers (Aytac & Yazici, 2020). In this case report, the follow-up and treatment process of a breast cancer case diagnosed during public health follow-ups during pregnancy and previously diagnosed during the COVID-19 period is discussed.

CASE REPORT

A 30-year-old housewife named A., who had a history of breast cancer in her aunt and her aunt's daughter, was diagnosed with breast cancer in the third trimester of her second

Table 1. Socio-demographic and Obstetric Characteristics of the Case

Medical History of the Case									
Age	Education	Profession	Spouse's education	Spouse's occupation	Substance use	Family structure	Financial status	Chronic illness	Family history of breast cancer
30	High school	Housewife	Ph.D. student	Research assistant	None	Nuclear family	Income equal to expenses	None	Aunt, Aunt's daughter.
Obstetric Information									
Number of pregnancies	Number of births	Miscarriages	Abortions	First Pregnancy	Second Pregnancy				
2	2	0	0	Last menstrual period: 31.03.2017 Delivery: 17.01.2018 – C/S	Last menstrual period: 22.10.2018 Delivery: 09.07.2019 C/S				

Table 2. Follow-up and monitoring after breast cancer

Postpartum Follow-Ups									
Date	Postpartum Follow-ups	Body Temperature	Blood pressure	Pulse	Lochia	Daily pantiliner use	Medication taken	Breastfeeding status	Infection status
11.07.2019	1st follow-up	35.8	110	67	Serous	5-6 times a day	Vitamin use continues	Breastfeeding from one (left) breast	None
Explanation	She went to her house for observation. Due to her breast cancer diagnosis, she breastfeeds the baby from one (left) breast. Within the scope of neonatal screening, the baby's second heel blood was taken. The baby was followed up. It was recommended that she continue breastfeeding her baby as long as the oncology specialists gave her approval. She was told that she could express the excess milk from the breast in the meantime and store it in sterile milk bags in the freezer. Plenty of water and nettle tea was recommended. It was recommended to continue the breathing exercises shown in the pregnancy training. Every day, they were asked to set aside 10 minutes for just the two of them with their spouse. In these 10 minutes, it was suggested that they should listen to a piece of shared music they like while enjoying Turkish coffee or that her spouse read a favorite book to her. It was stated that when she needed support, she could make a phone call with the midwife S.H.A.								
22.07.2019	2nd follow-up	36	100	60	Alba	3-4 times a day	-	Breastfeeding from one (left) breast	None
Explanation	The second follow-up was done in a state hospital. Follow-up information was obtained from A. by telephone. Positron emission tomography (PET) was performed, the operation was decided, and then it was said that she would receive chemotherapy and radiotherapy. She continues to breastfeed her baby from one (left) breast, and the formula is started occasionally to prepare the baby for the following process. A. stated that she was pleased with the clarity of the situation and that her morale was good.								
19.08.2019	3rd follow-up	36	106	67	-	Daily	-	Breastfeeding from one (left) breast	None
Explanation	She went to her house for observation. She was operated on in a state hospital; the drains were removed. The incision site is clean. The dressing was done, and a new (waterproof) band-aid was applied so that she could take a shower. She receives the most significant social support from her husband. Her mother also takes care of the children's household chores. The morale of A. is excellent; the Creator gave the illness, also gave medical people and their solutions, so she says she will get through this process well. She has a very dignified stance, enough to arouse admiration. She continues to breastfeed from one breast. According to the pathology results, it was said that drugs that would not affect breastfeeding could be used and that breastfeeding could continue. They are waiting for the pathology result. Edinburgh Postnatal Depression Scale (EPDS) was filled on 19.08.2019, and the score was 3. She states that they often take a 10-minute coffee and music break with her husband, although not every day, making her feel good. She states that with the support of her husband, mother, close friends, and the midwife, she spent the process more worry-free.								

pregnancy (06.08.2019). The obstetric features of the case were two pregnancies, two births, no abortions and no curettages. She underwent a C-

section (C/S) in her first delivery on 17.01.2018 at term. The second birth was performed with C/S on 09.07.2019 in the 36th gestational week

Table 3. Diagnosis, Follow-up and Treatment Reports of the Case

Date	Examination Conducted	Where Applied	Examination Result
19.06.2019	Mammography	A State Hospital	A hypoechoic solid mass lesion in the lower outer quadrant of the right breast, 45*22 mm in size, with smooth lobulated contours. Several reactive lymph nodes with a thick cortex and a central echogenic fatty hilus with 12.5 and 7.8 mm were observed on the right in both axillae.
20.06.2019	Trucut breast biopsy	A State Hospital	Invasive breast carcinoma (metaplastic carcinoma) nuclear grade 3 with focal squamous differentiation in the lower outer quadrant of the right breast.
23.07.2019	PET	A State Hospital	In the thoracic sections, starting from the upper outer quadrant of the right breast to the lower outer quadrant, several lesions extending towards the skin surface were observed in the anteromedial neighborhood of the described lesion. It is slightly increased in lymph nodes at levels 1,2,3 in the right axilla. Minimal FDG uptake was seen in the left breast inner quadrant. Slightly increased FDG uptakes of heterogeneous character at the level of the rectus muscles at the pelvis level were noted. In addition, increased FDG uptake was observed in several lymph nodes, the largest of which reached approximately 15 mm in diameter, in the left inguinal fossa.
23.07.2019	MRI	A State Hospital	A central necrotic mass of approximately 53*47 mm was observed in the lower outer quadrant of the right breast. No skin thickening was detected.
23.07.2019	Mammography	A State Hospital	There is a mass lesion of approximately 6 mm in diameter in the lower outer quadrant of the right breast (diagnosed with cancer). A thin oily plan can be selected between the skin of the mass. A few fatty lymph nodes were observed in the right axilla in the breast ultrasound examination, the largest of which was 29.12 mm cortex, and histopathological examination was recommended.
Hospitalization 05.08.2019 Leaving the hospital 08.08.2019	Epicrisis Form	A State Hospital	Fat cells were also excised in the axilla, including breast tissue and pectoral muscle fascia. Two silicone drains were placed extending to the axilla and breast.
06.08.2019	Surgery Pathology	A State Hospital	Right mastectomy material tumor invasive ductal carcinoma was observed. Four lymph nodes extracted from the axilla were seen. No reactive hyperplasia metastasis was observed in the node.
15.09.2019	Abdominal Ultrasound	A State Hospital	The uterus is myomatous in appearance. Gynecological consultation is recommended.
29.08.19 15.10.19 Material received The result has come	Molecular Genetic Analysis Report	A State Hospital	Result: Mutation c.5508G >A (p.Trp1836Ter) Heterozygous. Genetic counseling was recommended.

after being diagnosed with breast cancer in the 34th gestational week. There was no problem with the first pregnancy follow-ups. The second pregnancy follow-ups were normal until the third trimester, and A. was diagnosed with breast cancer in the third trimester when she applied to the clinic due to feeling a mass in her chest (Table

1).

There was no problem in the postpartum follow-up of the case after the diagnosis of breast cancer. Breastfeeding was continued from one (left) breast since A. did not use any medication that could negatively affect breastfeeding. The postpartum and breast cancer follow-ups of the

Table 4. Follow-up and Treatment Process in the COVID -19 Period

Date	Examination Conducted	Where Applied	Examination Result
09.03.2020	Radiation oncology report	A State Hospital	After the computerized tomography was taken for simulation purposes on 28.02.2020, a 3D conformal radiotherapy technique was planned. Postoperative radiotherapy (curative) was applied between 09.03.2020 - 29.04.2020. The patient received inpatient treatment due to Covid-19 findings during radiotherapy.
01.02.2021	Left breast pathology	A State Hospital	Morphological findings were stated to be compatible with fibroadenoma in the foreground. It was recommended to evaluate the case with clinical and radiological findings.
05.04.2021	First Dose COVID-19 Inactive Vac	A State Hospital	COVID-19 vaccine first dose
22.04.2021	PET 8pozitron emiston tomografisi	A State Hospital	There are mass lesions in the left lung, the largest of which is about 3.2 cm in diameter, and they appear to have developed recently compared with the previous study. In the abdomen, the right lobe of the liver suggested metastasis at first, but its correlation with MRI findings was suggested if clinically necessary.
03.05.2021	Second Dose COVID-19 Inactive Vac	A State Hospital	COVID-19 vaccine second dose
18.05.2021	Left Breast MRI	A State Hospital	The left breast is in the middle outer quadrant. Although its appearance is primarily suggestive of a benign lesion, histopathological verification of the described lesion on the left was suggested for the case with a history of right breast cancer.
02.06.2021	Chemotherapy and Immunotherapy	A Private Hospital	Chemotherapy and immunotherapy started to be applied.

case are given in Table 2.

A mammography scan was performed in a state hospital on 19.06.2019, and a hypoechoic solid mass lesion of 45*22 mm in size with a smooth lobulated contour was observed. On 25.06.2019, a breast biopsy was performed, and the diagnosis of breast cancer was confirmed. In the Positron Emission Tomography (PET) examination performed one month later, increased fluorodeoxyglucose (FDG) uptake was observed in the area of the mass lesion reaching approximately 55 mm in diameter, starting from the upper outer quadrant of the right breast and extending to the lower outer quadrant in the thoracic sections. Magnetic Resonance Imaging (MRI) and Mammography were repeated on the same date. After the breast cancer was confirmed in the examinations, A. underwent surgery for

breast cancer on 05.08.2019 (Table 3).

The frequency of follow-up of the case decreased during the COVID-19 pandemic. The reason for this is thought to be the increase in the pandemic, the transformation of clinics into pandemic services, and the uncertainties of treatment protocols for breast cancer patients during the pandemic process (Cen et al., 2021; Dietz et al., 2020; Soran et al., 2020; Vanni et al., 2020). Treatment with conformal radiotherapy technique was planned for our case on 09.03.2021 in line with tomography results. In this process, the patient also developed lung and liver metastases. The case was hospitalized between 09.03.2020 and 29.04.2020 due to COVID-19 findings. Despite showing all the signs of COVID-19, the PCR test was negative. However, when the case continued to show

symptoms, it was considered positive, and COVID-19 treatment was started. After the treatment, the first dose of COVID-19 inactivated vaccine was administered to the patient on 05.04.2021 and the second dose on 03.05.2021 (Table 4). When the current status of the case was questioned, it was determined that he received chemotherapy and immunotherapy treatment on 02.06.2021. It was observed that the response of the case to immunotherapy was positive. The tumors that developed metastases were evacuated by surgical operation. Post-procedure infection developed.

The Pre-diagnosis of the patient was followed up by a midwife in the family health center. After a manual breast examination at 34 weeks of gestation, the patient applied to the family physician because of a palpable mass in her chest, and the family physician was directed to a higher level. Prenatal pregnancy follow-ups were followed by the protocols of the Ministry of Health (Sağlık Bakanlığı, 2014). Postpartum home visits were made, and breastfeeding and baby care counseling were provided. When the patient received radiotherapy and was hospitalized due to COVID-19, online interviews were made every other day. In this process, social support was provided by the midwife working in the unit where the patient is registered in the institution that provides the first level health service to the patient.

DISCUSSION

During the pandemic, cancer patients' concerns, follow-ups, and treatments are a population that should be carefully monitored. In a China-wide study by Liang et al. examining the COVID-19 surveillance of patients with cancer, they found that those with cancer were at higher risk for severe clinical events than those without cancer (Liang et al., 2020). In the additional report of COVID-19, in which Zhang et al. examined 28 cancer patients, the mortality rate of cancer patients was 28.6% (Zhang et al., 2020). In our case, results and follow-ups were seen following the literature. Our case was seen at risk for COVID-19 infection, COVID-19 symptoms were closely monitored, and COVID-19 vaccines

were administered for preventive treatment. It was observed that the Anti-SARS-CoV-2 S test result after Covid vaccines was * >250.

Breastfeeding follow-up during the COVID-19 process has differed from the literature (AAP, 2020). Midwife-assisted breastfeeding counseling was given to our case during this process. Breastfeeding and care support was provided to the patient at home. In the postpartum period, home visits were made to the case for both maternal and infant follow-up, including neonatal screening. Pregnancy and birth support were ensured to continue without interruption in both cancer cases and pandemic situations. This process was supported by the low EPDS score of the case. The midwifery care given to the case complies with the literature (Aytac & Yazici, 2020; Gjoni & Alevizou, 2020; Vivilaki & Asimaki, 2020; Yurtsal, 2020)

CONCLUSION

In this case report, the importance of social support-oriented midwifery care in the puerperium process of a woman diagnosed with breast cancer was understood, and its importance in midwifery care was emphasized. It is supported by the positive feedback that the social support network facilitates the adaptation to the treatment process and makes it feel good. Social isolation, especially in the COVID-19 pandemic, reaffirms the need for professional health care to be social support oriented. During the pandemic process, public health units should establish regional screening programs and social support programs. Public health units should be involved in multidisciplinary teamwork and organize online or face-to-face trainings for the physical and mental needs of individuals. In addition, public health units should organize educational brochures and programs on hygiene and prevention measures from COVID-19 during the pandemic process, especially for breast cancer and other cancer-followed individuals.

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