

BREAST CARCINOMA METASTASIS TO THE TAIL OF PANCREAS

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Bu çalışma, 2. Tıbbi Onkoloji Kongresinde sözlü bildiri olarak sunulmuştur.

ABSTRACT

The most common distant metastasis of breast cancer are detected in liver, lung, bone and brain. However, atypical organ metastasis is not uncommon. Isolated pancreas metastasis can be seen rarely as well. There have been only seven cases described in the literature. Here, we report extremely a rare case of breast cancer, which metastasizes to the pancreas tail. The patient has diagnosed as breast cancer four years ago, gradual increases in serum levels of CEA and Ca15-3 were detected (129 (0-4,3ng/ml) and 84 U/ml (0-25 U/ml) respectively) in routine follow-up. Although she had no symptoms, contrast-enhanced abdominal computerized tomography (CT) scan revealed a mass of 81mm x 79mm x 68mm, with a necrosis in the tail of the pancreas. No other metastatic sites were detected by gastric endoscopy, lung CT scan or bone scintigraphy. Percutan transabdominal biopsy from tail of pancreas was showed that metastasis of breast carcinoma. We propose that, when an increase is detected in tumor markers, such as CA15-3 or CEA, without any detectable metastasis in common metastatic organs, should be investigated other atypical metastatic areas such as pancreas.

Keywords: Breast cancer; metastasis tail of pancreas; atypic metastasis

İZOLE PANKREAS KUYRUĞUNA METASTAZ YAPAN MEME KANSERİ OLGUSU

ÖZET

Meme kanserinde en sık uzak organ metastaz bölgelerini karaciğer, akciğer, kemik ve beyin oluşturur. Ancak meme kanserinde atipik metastazlar nadir değildir. Meme kanserinde izole pankreas metastazı nadiren görülebilmektedir. Literatürde izole pankreas metastazı sadece 7 vakada saptanmıştır. Biz burada oldukça nadiren görülen izole pankreas kuyruğuna metastaz yapan meme kanseri olgumuzu sunuyoruz. Dört yıl önce meme kanseri tanısı alan hastamızda rutin takipler sırasında CEA ve Ca15-3 düzeyinde (129 ng/ml (0-4,3ng/ml) ve 84 U/ml (0-25 U/ml) sırasıyla) artış saptandı. Bununla birlikte hastanın hiçbir şikayeti mevcut değildi ve rutin takipler sırasında karın bilgisayarlı tomografisinde (BT) 81x79x68 mm nekroz içeren kitle saptandı. Üst gastrointestinal sistem endoskopisi normal olarak değerlendirildi, akciğer BT'de veya kemik sintigrafisinde metastaz saptanmadı. Perkutan transabdominal pankreas kuyruğundaki kitleden yapılan biopsi sonucu meme kanseri metastazı olarak değerlendirildi. Tipik metastaz bölgelerinde metastaz saptanmayan tümör belirleyicilerinde yükseklik saptanan olgularda pankreas gibi atipik metastaz bölgelerinin araştırılması gerektiği kanaatindeyiz.

Anahtar sözcükler: Meme kanseri, pankreas kuyruğuna metastaz, atipik metastaz

Introduction

Breast cancer is the most common cancer in women and the second leading cause of malignancy related death in women. Despite these increasing incidence, mortality because of breast cancer continues to decline (1,2). The mortality in breast cancer is mainly the organ metastasis. The most common metastasis occurs in liver, lung and brain. However, atypical organ metastasis is not uncommon. There have been only seven cases described in the literature (3-7). Here, we are reporting eighth case and the second case that metastasized to the pancreas tail.

Case

A 44-year-old female patient was admitted to our clinic with a complaint of swelling on her right breast almost five years ago. In physical examination, a mass of 5 cm in diameter, ulcero-hemorrhagic, crustaceous and erythematous, was detected on the

right breast. The patient had a T4 tumor. After fine-needle aspiration, invasive ductal breast carcinoma was detected in pathological examination. Routine hematological and biochemical examinations were in normal range. Ca15-3 and CEA were 60 U/ml (0-25 U/ml) and 84 ng/ml (0-4,3ng/ml), respectively. Luteinizing hormone (LH) was 8 U/L (16-66 U/L) and follicle-stimulating hormone (FSH) was 6 U/L (30-118 U/L). Bone scintigraphy, CT scan of thorax, abdomen and brain revealed nothing significant for metastases. We applied 3 cycles of neoadjuvant chemotherapy: cyclophosphamide, adriablastina and 5-Fluorourasil. We had partial response after neoadjuvant therapy. The patient underwent a modified radical mastectomy and axillary lymph node dissection. The pathological examination revealed the followings: tumor, 2 cm in diameter; nuclear and histological grade 2, 40% of necrosis; negative surgery lines; neural, but no vascular or capsular, invasion. Eighteen of nineteen lymph nodes was

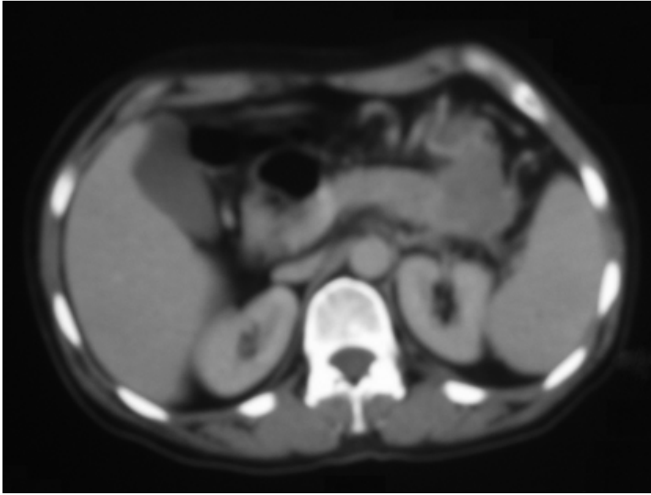


Figure 1.

infiltrated with malignant cells. Estrogen receptor (ER) and progesterone receptor (PR) were positive, 90% and 10%, respectively. Ki67 and Her-2 were negative in immunohistochemical analysis. After curative surgery, Ca15-3 and CEA were found in normal range. We administered an adjuvant treatment in 4 cycles of cylophosphamide, adriablastina and 5-Fluorourasil, and 4 cycles of weekly paclitaxel treatment. After adjuvant chemotherapy, we used adjuvant radiotherapy and tamoxifen 20mg/day. Three years after the diagnosis of breast cancer, patient admitted with complaints of severe headache, progresive nausea and vomiting. We detected multiple cranial metastasis in contrast cranial magnetic resonance imaging (MRI) and no other metastasis was detected in systemic evaluation. All of the complaints were disappeared after a paliatif whole cranial 30 gray radiotherapy was administered.

After one year of cranial metastasis, an increase in serum levels of CEA and CA15-3 were gradually detected (129 ng/ml (0-4,3ng/ml) and 84 U/ml (0-25 U/ml), respectively) in routine follow-up, but Ca19-9 level was in normal range. Although she had no symptoms, contrast-enhanced abdominal CT scan revealed a mass of 81mm x 79mm x 68mm with a necrosis in the tail of the pancreas (Figure 1). No other metastatic sites were demonstrated by gastric endoscopy, lung CT scan or bone scintigraphy. We planned to perform an excisional surgery for the mass in the tail of pancreas in order to confirm the diagnosis, whether it was a pancreatic mass or a metastasis of breast carcinoma, and treatment, however, the patient refused to undergo the surgery. We used percutaneous core biopsy from the tail of pancreatic mass guided by ultrasonography. In histopathological examination, invasive ductal carcinoma metastasis, ER and PR positivity and Her-2 negativity were detected. For paliative therapy, in each cycle we administered dosetaxel (100 mg/m²) every three weeks. At the end of treatment, she had a partial response, with 34mm x 27mm diameter of tumor mass (Figure 2). After that high levels of FSH and LH were detected (62 and 54,



Figure 2.

respectively), we administered exemestane therapy for almost 5 months. Afterwards, she had no symptoms and no progression the pancreatic metastasis.

Discussion

The vast majority of pancreatic carcinomas are primary, and among these, more than 90% are of ductal origin. However, a variety of extrapancreatic tumors may involve in the pancreas secondarily, and may manifest different clinicopathological characteristics and outcomes. Lung cancer is the most common origin of metastasis to pancreas, followed by gastrointestinal carcinomas and lymphomas. These tumors are usually seen in patients with disseminated disease and are detected mainly in autopsies. In Adsay N.V et al. (8) study; pathology material from 4955 adult autopsy cases and 927 surgical specimens were reviewed to identify the tumors metastatic or secondarily involving the pancreas. In this assessment, in autopsy cases, pancreas was involved by tumor in 190 cases, and secondary tumors of this line were predominantly of epithelial origin, most commonly from lung, followed by GI tract, kidney, breast, liver, ovary, and urinary bladder (1). In addition, there were six tumors of hematopoietic origin, two melanomas, two sarcomas, and two mesotheliomas. Among the 973 surgical specimens, 38 cases contained metastatic tumors of the pancreas. Of those, 11 were lymphomas and the others were carcinomas of stomach, kidney, lung, liver, prostate, ovary, uterus and a Merkel cell carcinoma.

Breast cancer commonly metastasizes to lung, bone and liver but metastasis to the pancreas is extremely rare (4,5). The incidence of metastatic involvement of the pancreas is 11-17% of autopsied cases of breast carcinoma (9). Excluding lung, liver or bone metastases, the statistical chance of metastasis from primary breast cancer is less than 3% (10). Only 6 cases of solitary metastasis to the pancreas with a detailed description can be found in the literature (4-7). This is the eighth report and the second case that metastasized to the pancreas tail. In literature, six of these seven cases were

metastazed to head of pancreas and most of the symphoms were jaundince, and pruritis with extrahepatic cholestasis. In these six cases; 4 had lobular carcinoma, 1 had signet ring cell carcinoma and comede type carcinoma. In contrast, in Tohnosu N. et al. (3) reported a 54-year-old woman with scirrhous type breast cancer that metastasized to tail of the pancreas with no symphoms. Our patient, similiar to Tohnosu et al. case, had invasive ductal breast carcinoma metastasis to tail of pancreas with no symphoms.

Breast cancer metastasis to the pancreas may closely mimic primary gastrointestinal tumors, where the head of pancreas tumors are generally symptomatic with extrahepatic cholestasis. Although tail of pancreas metastasis is usually asemptomatic, it can be detected by elevated tumor markers in rutin radiological evalution with no symptoms. Additionally, it will be difficult to distinguish primary pancreas carcinoma or metatstic tumor. Hence, these patients are usually treated by surgery for diagnosis and therapy at the same time. Some of these patients do not want to have surgery, such as our patient, or some of them had multiple intra-abdominal metastases and surgery will not be efficient for these group of patients. Percutaneous EUS-fine needle aspiration or percutaneous core biopsy guided by ultrasonography should be used for diagnosis for these patients. The Fritscher-Ravens A et al. (11) study showed that 114 consecutive patients (mean age, 61 years) with focal pancreatic masses, who were applied simultaneous EUS-FNA, allows cytodiagnosis for primary or metastatic masses.

The taxanes, docetaxel and paclitaxel, are now one of the mainstay in the treatment of adjuvant or metastatic breast carcinoma (12). They can be used as single agent or combination with other chemotherapeutic agents. Dose-taxel is mostly used in combination with other chemotherapeutic agents in patients, who has metastasis to lung or liver. However, it can be used as a single agent for the patients, who are not eligible for surgical treatment, like our patient.

In conclusion, common metastases are seen in breast cancer patients. Our patient has breast cancer with an atypical metastasis to the tail of pancreas. We propose that, when an increase is detected in tumor markers, such as CA15-3 or CEA, metastasis to pancreas, other than common metastatic organs, should be investigated in patients without any detectable metastasis or patients with complete remission.

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