Multiple Primary Malignancies in a Patient; Astrocytoma, Malign Mesenchymal Tumor and Pancreatic Tumor

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ABSTRACT

Although they are rare, multiple primary malignancies can be seen in the same organ or in different places simultaneously or at different times. Simultaneous multiple primary malignancies are seen much more rarely. Thirty year old male patient was operated for malign mesenchymal tumor in his right femur four years after he underwent a surgery for astrocytoma. During his post-operative follow-up, there was an unresectable mass in pancreas determineted. The patient who was diagnosed with pancreatic cancer as a result of biopsy, was given palliative cisplatin, gemcitabine regimen. Complaints about other site in cancer patient should be evaluate meticulously for multiple primary malignancies.

Key Words: Astrocytoma, Malign mesenchymal tumor, Pancreatic tumor

ÖZET

Çoklu Primer Kanser Vakası; Astrositom, Malign Mezenşimal Tümör, Pankreatik Tümör

Multipl primer kanser; sık görülmemekle beraber, aynı organda veya farklı lokalizasyonda, aynı anda veya farklı zamanlarda görülebilmektedir. Aynı anda birden fazla sayıda kanser vakaları daha nadir olarak rastlanmaktadır. Otuz yaşında erkek hasta astrositom tanısı ile opere olduktan 4 yıl sonra sağ femurda malign mezenşimal tümör tanısı ile opere edildi. Postoperatif takiplerinde pankreasta unrezektabl kitle tespit edildi. Hastaya yapılan biopsi sonucunda pankreas kanseri tanısı gelmesi üzerine palyatif cisplatin, gemcitabine rejimi başlandı. Kanserli hastalarda diğer sistemlere ait şikayetler, multipl primer kanser olasılığı nedeni ile titizlikle değerlendirilmelidir.

Anahtar Kelimeler: Astrositom, Malign mezenşimal tümör, Pankreatik tümör

INTRODUCTION

Although they are rare, multiple primary malignancies can be seen in the same organ or in different places. Environmental, immunological, viral and genetically factors could cause multiple cancers, however, their exact cause is still not known. Also, they could be seen sporadically(1,2). As a result of developing diagnosis and scanning methods, cases of multiple cancer are reported at a gradually increasing rate.

CASE

A 30-year-old male patient applied to a health center with complaints of severe headache. A total resection was performed on him after a mass was determined in his right frontoparietal area. The diagnosis was revealed as astrocytoma with low-grade pathology. Postoperative radiotherapy (RT) was planned, however the patient rejected it. Two years later, the patient applied to hospital with same complaints. A subtotal tumor resection was performed after a mass was seen in his right frontotemporal area. He was diagnosed with astrocytoma grade 3 (Figure 1). A post-operative RT was performed on him. The patient applied to hospital four years later with complaints of pain in his right leg. A lytic lesion was determined in distal right femur in x-ray. The computed tomography revealed high-level porotic degenerative abnormalities in bone structure in right femur distal and sclerotic changes cortical structures. An insisional biopsy was performed from the lesion in right femur. In the microscopic examination, a bone structure infiltrated tumoral tissue with a solid development was determined. The tumoral tissue was composed of spindle-shaped cells with high-level pleomorphic and hyperchromatic nucleus and evident nucleolus as well as bigger atypical cells (Figure 2). In immunohistochemical examination, painting with CK, S-100, GFAP, EMA, CD 56, Actin, Desmin, Myoglobin in tumor cells was not seen but focal painting with CD68, KP-1 were observed. As a result, high-grade malignant mesenchymal tumor diagnosis was done. The patient underwent right above knee amputation after staging procedure. After the three months later the patient was admitted to hospital with suffered from jaundice. In the abdominal ultrasonog-

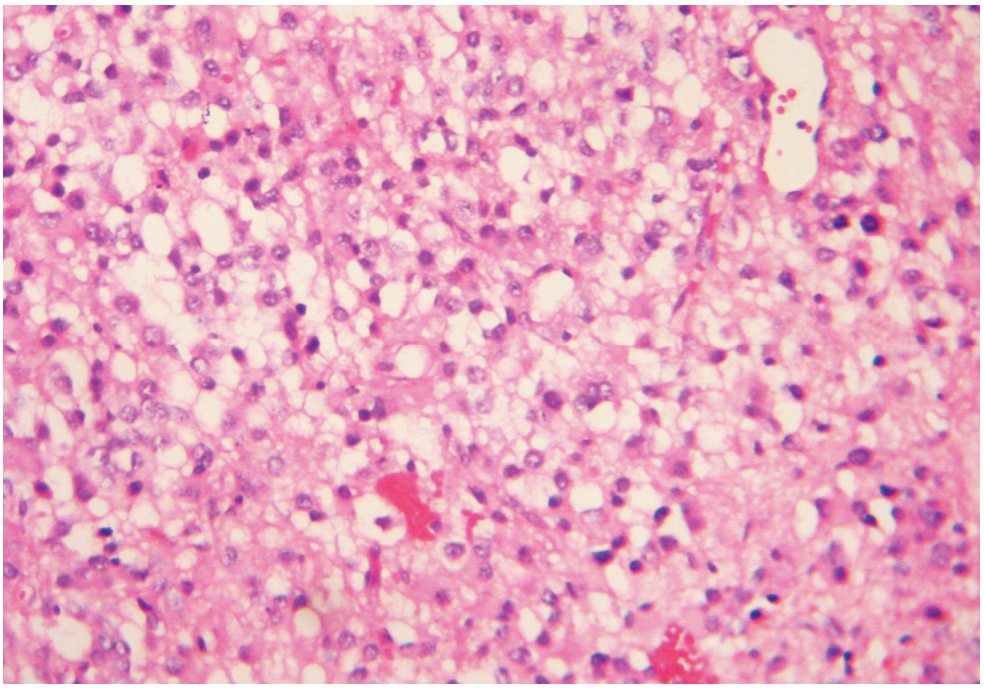

Figure 1. Astrocytoma, WHO Grade III (HE X100).

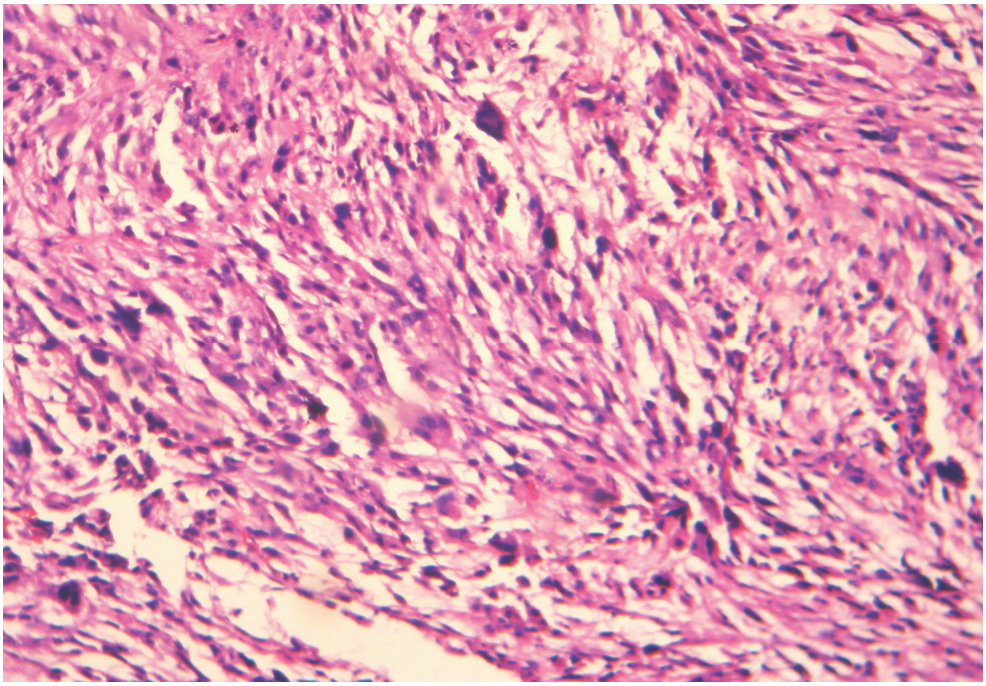

Figure 2. Advanced pleomorphism in malignant mesenchymal tumor cells (HEx100).

raphy, a 45 mm mass in the head of the pancreas and bilateral dilate bile ducts, dilated choledochus as 19 mm, hydropic gall bladder were established. In the endoscopic retrograde cholangiopancreatography (ERCP) a malignant narrowness was seen in the dilated choledochus and a metal stent was placed in this area. The patient was performed a fine-needle aspiration biopsy from pancreas; when the material was stained with Giemsa, atypical epithelial cells with pleomorphic and hyperchromatic nucleus and evident one or more nucleolus in one by one or in three-dimensional groups besides pancreatic duct and acinar cells (Figure 3). In a comparison with his previous pathology specimen, it was thought that the lesion might belong to pancreas. Ca 19.9 level was also measured elevated (Ca 19.9: 912, normal: 0.6-39 U/mL). Cisplatin 70 mg/m2 on day 1 and gemcitabine 1000 mg/m^2 on day 1. and 8. by 21 days cycle were started by intravenously with palliative aim to the patient who has accepted as irresectable. His chemotherapy has still been continuing.

DISCUSSION

Reasons of multiple primary tumors are smooking (in respiratory, urinary and gastrointestinal cancers); alchol (pharynx, larynx, esophagus, liver cancers), genetic changes such as BRCA1/2 mutations (in breast, over cancers) or microsatellite instability (MSI) as in Lynch Syndrome (in colon, endometrium, stomach cancers); enviromental factors for example asbestos (in lung, pleura, peritoneal mesothelioma), ionizing radiation (lung cancer, leukemia) (1). In multiple primary cancers etiology, genetic changes, especially MSI was reported more frequently than sporadic cases (2). Multiple primary phenomenon such as Garndner, Turkout, Oldfield Syndrome, Multiple Endocrine Neoplasia (MEN) are included in clinical experiences. Among them Turcout Syndrome is described as together with colonic polyps and central nervous system tumors (3). When we performed an colonoscopy on our patient due to constipation, we did determine any findings of malignancy or colonic polyps. Although multiple endocrine neoplasia type 2 neural

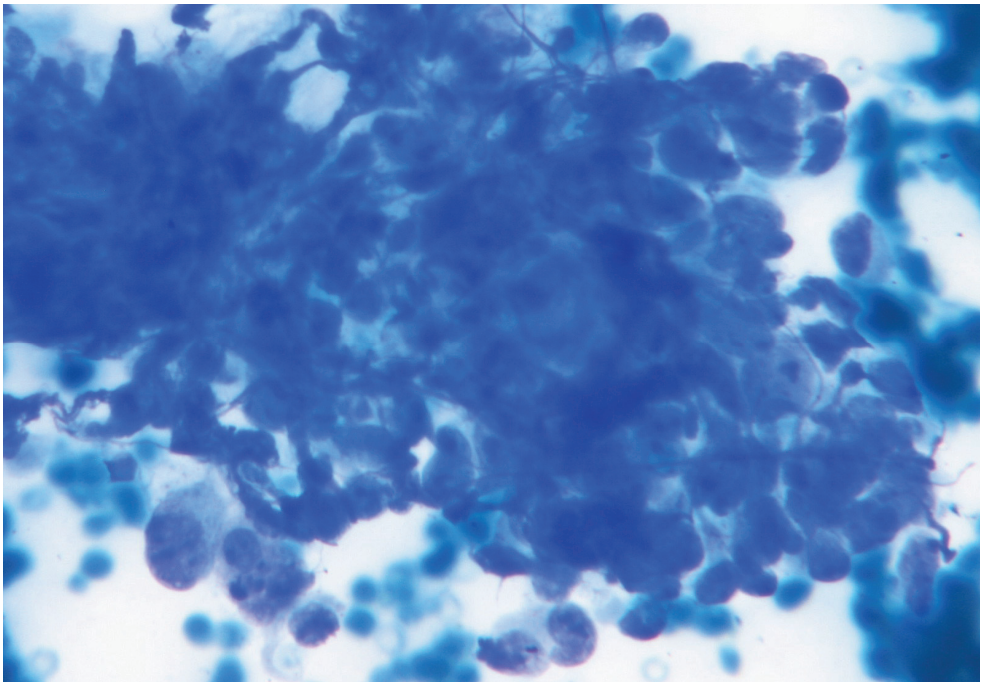

Figure 3. Fine needle aspiration from tumor in pancreas (Giemsa x400).

tumors were seen but those tumors showed the typical findings of ganglioneuroma with a mucous membrane settlement together with medullar thyroid carcinoma and pheochromocytoma. Skin findings did not exist in our case and his thyroid examination was normal. Also there was not any finding supporting pheochromocytoma. Besides in case of presence of factors like cigarette which could cause more than one site of the cancers, multiple cancers can be seen in same system or in the other systems. It is hard to explain co-existence of central nervous system tumor, malignant mesenchymal tumor and pancreatic cancer in our case with environmental and the other known reasons. Another reason for multiple primary tumors is Li–Fraumeni Sydrome which included breast cancer, leukemia, sarcomas, pancreas, colon and brain tumors. The association of sarcoma, pancreas and brain tumors in our case look like this syndrome (4).

Tripartite primary cases are seen more rarely, and cases of stomach, colon, head and neck, gynecological malignancies were reported in the literature (5-7). On the other hand, malignant mesenchymal tumor including multiple primary are seen rarely when compared to the other multiple primaries (8).

One of the biggest problems in cases of multiple primary is to determine the chemotherapy regimen that will include active tumors. The most important thing to be taken into consideration in determining the regimen is to prepare a chemotherapy plan that will contain the other tumors by giving priority to the most aggressive tumor.

In patients with multiple primary cancer, symptoms are not well-evaluated since they are attributed as the current disease or side effects stemming from chemotherapy or radiotherapy. This leads to delays in ensuing diagnosis in the patients with multiple primary cancer. Probability of multiple primary cancers, symptoms should be evaluated meticulously in cancer patients.

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