

THE AGGRESSIVE CLINICAL COURSE OF A PATIENT WITH BENIGN METASTASISING PLEOMORPHIC ADENOMA OF THE PAROTID GLAND WITHOUT LOCAL RECURRENCE

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ABSTRACT

Benign metastasising pleomorphic adenoma (BMPA) is an extremely rare tumour that is classified histologically. A 58-year-old-woman presented with Pleomorphic adenoma originated from parotid gland with lung metastasis without local recurrence: There is no effective treatment except total excision and closely monitoring a benign PA with metastasis is important. Herein we report a rare case because of the several cases with metastasis without local recurrences have been reported in the literature.

Key words: Metastasizing pleomorphic adenoma, Parotid gland, Surgery.

INTRODUCTION

Pleomorphic adenoma (PA) is the most common salivary gland tumor; another name is "benign mixed tumor". The majorities (80%) are from the parotid gland [1]. Even though rarely presented with metastases without malignant transformation and local recurrence has been reported and histopathological type of this "benign metastasizing pleomorphic adenoma (BMPA) was given the name. In our study, we present a case of a BMPA without recurrence associated with bilateral multiple lung metastases.

Case Report

A Fifty-eight years old woman; a month ago, presented with swelling in the mouth from the otolaryngology clinic mass excision applied. Histopathology results reported as pleomorphic adenoma. Three months after the operation, on chest radiography; bilateral peripheral multiple metastatic lesions were established, the case referred to our clinic. Physical examination was normal. Thoracic computed tomography (CT) showed multiple metastatic nodules in both lungs [Figure 1]. Positron emission tomography (PET) in bilateral millimetric lung nodules observed fluorodeoxyglucose (FDG) uptake was not detected. Out of hypertension, restless leg syndrome, and chronic renal failure did not have a disease accompanying. The biochemical parameters were normal. Wedge resection was performed via video assisted thoracic surgery (VATS) a nodule in the middle lobe for diagnosis. This was due to the patient's lack of respiration reserves; bilateral metastasectomy was not considered. The histopathological diagnosis was reported as BMPA [Figure 2A, B]. Surgical excision of the parotid mass was reported a dominant chondromyxoid stroma with the plasmacytoid morphology of the myoepithelial cells of a tumor. In the presence of tumor capsule invasion could not be assessed with certainty. In which both the lung metastasis and primary tumor had a same histologic appearance and Ki-67 proliferation index. In light of findings was not considered carcinoma ex-pleomorphic adenoma. The oncology council concluded to consult with the Medical Oncology and Radiation Oncology Clinic for external radiotherapy and chemotherapy. Three cycles of cisplatin 75 mg/m² and doxorubicin 60 mg/m² chemotherapy and 30 Gray in 10 fraction radiotherapy were performed. Six-month after diagnosis, new metastasis were detected in celiac root, distal infrapancreatic area and mesenteric fat tissue. She is still alive two years after the initial diagnosis but, tumor metastases have dramatically increased.

DISCUSSION

BMPA or "metastasizing mixed tumor" is called, is a very rare histopathologic type; although there is not a malignant character tends to metastasize to various organs [2]. In order for the PA to be diagnosed as being benign metastasizing pleomorphic adenoma (BMPA), two conditions must be met. First, the typical histological findings must not show the presence of malignant histological features such as anaplasia, necrosis, or atypical mitosis, such as invasive growth but, must show the same histological character with the primary tumor. Second, the metastases must share the same histological character as the primary tumor [2]. Although it is important to histologically monitor benign PA with metastasis, the condition can be explained using two theories. First, vascular or lymphatic invasion occurs in the primary tumor and second, in the metastases during the surgical procedure depending on whether the iatrogenic intravascular tumor implantation is a hematogenous spread metastasis. A hematogenous metastasis spread by regional lymphatic involvement is more common. On the other hand, metastatic lesions were reported in other systems [3]. Recurrence was detected in 90% of patients presenting with metastases in the primary tumor. Several cases with metastasis without local recurrence have been reported in the literature. The presence of a primary lesion 3-52 years after the initial diagnosis of metastases has been reported [4]. In our case, the metastasis was seen six months after the diagnosis, and local recurrence after surgical excision and surgical margin positivity were not detected. Metastasizing pleomorphic adenoma has a benign character although mortality rates can reach up to 22% [5]. In their study, Nouraei et al. [6] reported that the BMPA 5-year disease free survival rate was 50%. It has been reported that 74% of BMPA cases occur in the parotid gland, 16% occur in the minor salivary glands, and 10% occur in the submandibular glands [6]. In our case, the BMPA originated in the parotid gland. When determining the aggressiveness of a malignant neoplasm, Ki-67 proliferation assay gene testing is extremely useful [7]. However, in their study of mostly low grade salivary gland tumors, Luuak et al. [7] found that Ki-67 antigen expression was negative. Flow cytometric analysis, oncogene analysis, and tumor suppressor gene analysis are insufficient for determining the metastatic potential of these tumors [8]. In our case, the Ki-67 proliferation index was positive in the glandular component, and the staining wasn't observed in the mesenchymal components. Although there are no histological differences between BMPA

and PA, BMPA is an aggressive tumor. In the studies of L-myc, N-myc, C-myc, BMPA, Bcl2, C-erbB2, Ha-ras, and Ki-ras oncogenes have also not been found by gene amplification or gene over expression. Immunohistochemical studies with tumor suppressor genes, like RB, and p16 and p53 tumor markers could detect deviations from normal tissue [8]. Nevertheless, it is not understood why BMPA is an aggressive tumor. Future studies on the biological causes of this condition are needed. Surgical excision is an adequate treatment, with a good prognosis. However, incomplete resection can lead to recurrence of the lesion. Complete resection via either a superficial or total parathyroidectomy is preferred to reduce the risk of local or metastatic recurrence [9]. Incomplete resection of metastases and local recurrence in patients with long-term follow-up is recommended. Chemotherapy and radiotherapy are not effective primary treatments. Recently, Knight and Ratnasingham [10] have published a systematic review of Metastasising Pleomorphic Adenoma. Eighty patients were included in this study, 26 (33.8%) of whom presented pulmonary metastases and may occur years after the initial PA and is associated with multiple local recurrences and, this is a negative prognostic factor [10]. Radiotherapy can be performed as an adjuvant, to better local control [10].

The case reported in the present paper showed the limited value of chemotherapy other than providing palliation in treating the metastasis and total surgical removal of lung metastases is important in appropriate cases. Future studies are needed to investigate diagnosis and tumor behavior, and to detect the biomarkers.

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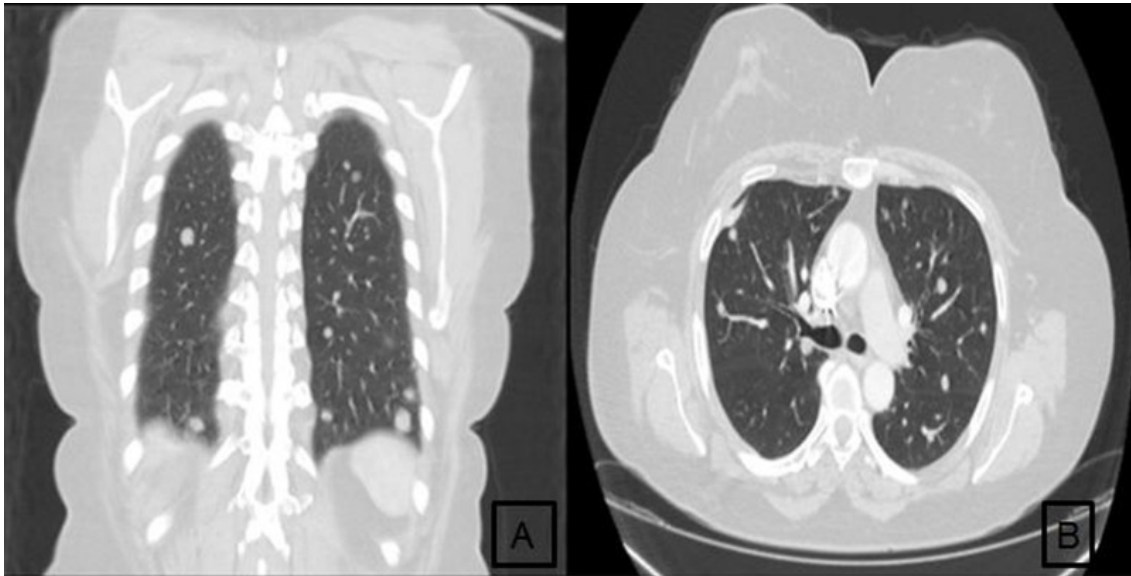


Figure 1

Thoracic computed tomography shows bilateral multiple metastatic nodules in the lung parenchyma **A:** Coronal section **B:** Axial section

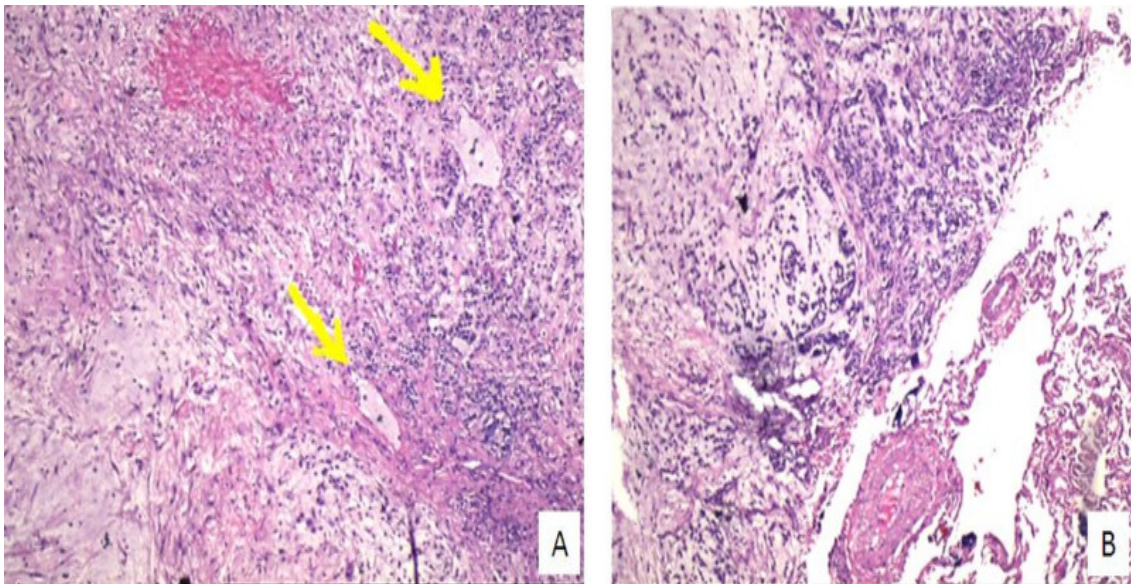


Figure 2

A: Arrow shows that Mixochondroid plasmacytoid appearance in stromal matrix with cords of cells forming benign epithelial-myoepithelial areas, occasionally forming small glandular structure of the ductal tumor control components are selected (H & E x 50). **B:** Arrow shows that Pleural area with paved peribronchial nodular structure in the dominant component for myoepithelial tumor tissue (H&E x50).