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# An Unusual Case of Basal Cell Carcinoma with Lung and Endobronchial Metastasis

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Recently, some cases of basal cell carcinoma (BCC) with lung metastasis have been reported, but those involving simultaneous tracheal, bronchial, and lung metastases have been rarely reported. Here, we have reported a very unusual case of BCC with metastasis, presenting with lung nodules and endobronchial lesions after two metastasectomies. Since BCC is a slow-growing cancer that rarely metastasizes to distant organs, tumor stage workup including radiological imaging has not been routinely performed in clinical practice. This case showed that BCC can metastasize to the lung, although the currently reported metastasis rate of BCC is extremely low.

**Keywords:** Basal cell carcinoma, Lung, Neoplasm metastasis

## INTRODUCTION

Basal cell carcinoma (BCC) is the most common skin cancer of the head and neck occurring after prolonged sun exposure. It is a slow-growing cancer that rarely metastasizes to other organs. Recently, some cases of BCC with lung and tracheal metastases have been reported. However, cases involving simultaneous lung, endotracheal, and endobronchial metastases have been rarely reported[1,2]. Here, we have reported a case of facial BCC with endotracheal and endobronchial metastases.

## CASE REPORT

A 58-year-old male was diagnosed with BCC on the left cheek 15 years ago at a local hospital and had undergone excision two times. Nine years after the diagnosis, metastasis was detected on chest computed tomography (CT), which showed a nodule measuring 2 cm in the right upper lobe and a nodule measuring 2.5 cm in the left lingular segment. The patient underwent metastasectomy of both the lungs and confirmed the presence of BCC. He received six courses of 5-fluorouracil and cisplatin-based chemotherapy for approximately 1 year. The patient was free of metastatic BCC recurrence for 6 years, until he presented with left upper lobe (LUL) lung metastasis again, for which he underwent video-assisted thoracoscopic surgery. Six years after surgical resection, chest CT, performed as part of a regular checkup, showed an enhancing soft tissue density in the left lateral tracheal wall, luminal narrowing of the proximal portion of the left main bronchus, and anterior arch pathological fracture of the left third rib (Fig. 1A, B). Bronchoscopy and mucosal biopsy revealed a mucosal lesion, a whitish patch, and an elevated polypoid mass in the left main bronchus (Fig. 1C, D). The patient was diagnosed with metastatic BCC recurrence for the third time with endotracheal and bronchial metastases and a pulmonary lesion on the LUL. On January, 2019, the patient underwent tracheal resection and end-to-end anasto-

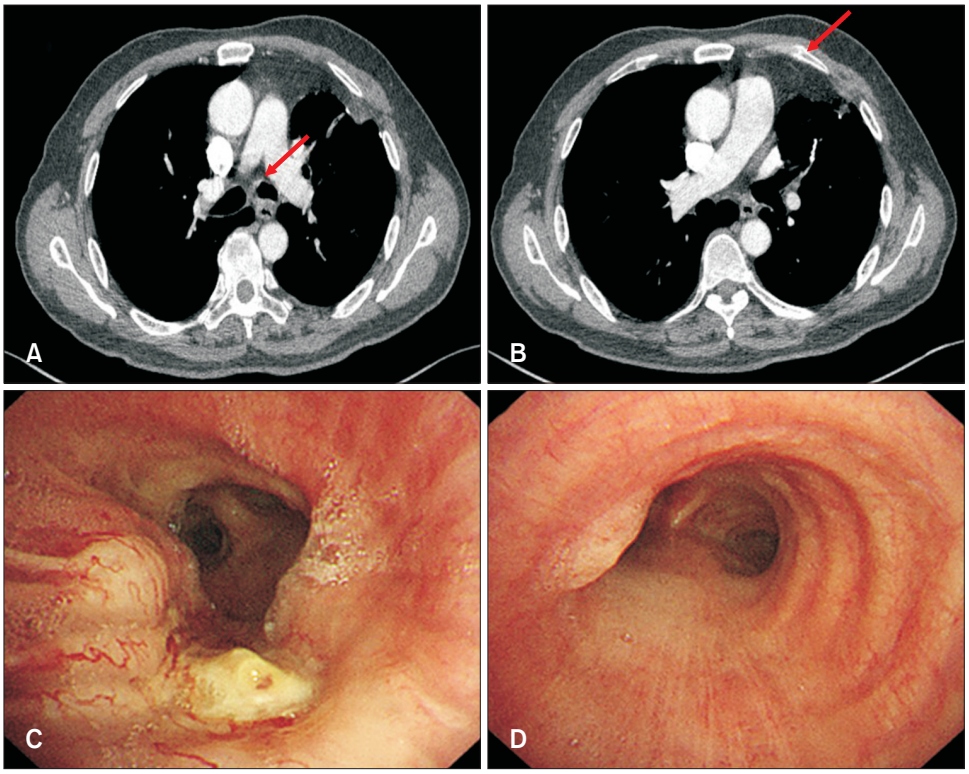


Fig. 1. Chest computed tomography showing the proximal portion of the left main bronchus with luminal narrowing (red arrow) (A) and anterior arch pathological fracture of the left third rib (red arrow) (B). Bronchoscopy showing a mucosal lesion, a whitish patch (C), and an elevated polypoid mass in the left main bronchus (D). We received the patient's consent form about publishing all photographic materials.

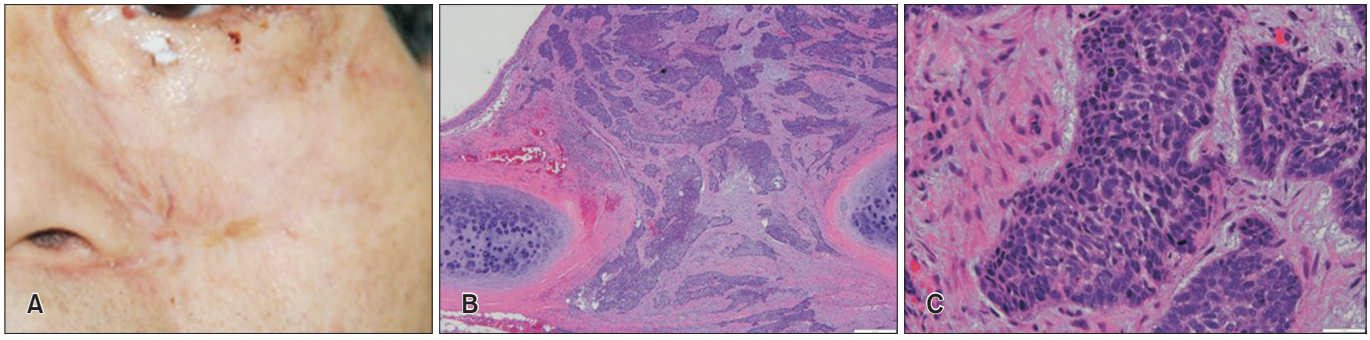


Fig. 2. (A) Recovery of the left side of the face without any side effects after surgery. Tumor cell nests involving the left bronchus invading the peribronchial soft tissue and the tumor in the trachea showing typical features of basal cell carcinoma including peritumoral clefts and basal palisading (B: H&E, ×40; C: H&E, ×400). We received the patient's consent form about publishing all photographic materials.

mosis, LUL sleeve lobectomy, and left third rib resection and reconstruction. Histological examination of all the surgical tissues confirmed the diagnosis of BCC; examination of the skin tissue revealed the same pathological findings (Fig. 2).

## DISCUSSION

BCC is the most common skin cancer worldwidely as well as in Korea with predilection site of the head and neck[1]. It is a slow-growing cancer that rarely metastasizes to other organs[3-5]. Recently, some cases of BCC with lung metastasis have been reported, but cases involving simultaneous lung, endotracheal, and endobronchial metastases have been rarely reported[1,2]. This report pertains to a very rare case of BCC with lung, endobronchial, and bronchial metastases after two metastasectomies.

In a previous study, the median age of onset of primary BCC was 45 years, and the average period between the diagnosis of the primary lesion and development of metastasis was approximately 10 years[6]. In our patient, lung metastasis was

found 6 years after primary tumor diagnosis. It took 13 years for the duration between primary tumor onset and simultaneous metastasis to lung, tracheal and bronchial portions.

The optimal treatment for metastatic BCC is complete surgical resection, if possible, as it confers favorable survival rates and recurrence-free time. Radiation and chemotherapy are therapeutic choices for metastatic BCC. Our patient underwent surgery and adjuvant chemotherapy. The patient underwent two additional surgeries for lung, tracheal, and bronchial metastases and is being closely followed up.

Although the patient with previous history BCC develops suspicious lesions as cancer in internal organs, it may be reasonable to suspect other primary or secondary cancer. Therefore, the diagnosis should be confirmed histologically for that suspicious lesions. Since BCC is a slow-growing cancer that rarely metastasizes, initial work-up with chest CT and bronchoscopy usually do not reveal BCC. Although survival is short after metastasis, longer survival is possible without recurrence for years after metastatic cancer treatment, as seen in our patient. Therefore, detailed examination and evaluation are needed for discrimination when finding lesions suspected of metastasis in patients with a history of BCC.

## CONFLICTS OF INTEREST

The authors have nothing to disclose.

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