

TONGUE CARCINOMA WITH ENDOBRONCHIAL METASTASIS: A RARE CASE*

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SUMMARY – Endobronchial metastases of extrapulmonary malignant tumors are quite rare. We present a patient with endobronchial metastasis previously operated for tongue carcinoma. A 71-year-old female patient presented with the complaint of cough. She had a history of tongue carcinoma operation 2 years before. Chest x-ray revealed an air-fluid level in the lower zone of the right hemithorax. There was a big cavitary lesion in the right lower lobe and bilateral multiple nodular lesions, some of which had cavity formation on computed tomography. Bronchoscopy revealed a polypoid lesion with necrotic appearance and pathologic examination showed squamous cell carcinoma. The lesion was accepted as a metastasis of tongue carcinoma after evaluation of the materials taken from the tongue on previous operation. There was no finding suggestive of local recurrence; however, the patient died from hemoptysis and respiratory insufficiency. In conclusion, endobronchial metastasis should be considered in patients with extrapulmonary malignancies and bronchoscopic examination should be performed in such cases, even in the presence of atypical radiological findings.

Key words: *Tongue neoplasms; Neoplasm metastasis; Bronchial neoplasms, secondary; Case reports*

Introduction

Endobronchial metastases of extrapulmonary malignant tumors are very rare, with a reported prevalence of 1%-2%. The most common tumors associated with endobronchial metastases are breast, kidney, colon and rectal tumors. Beside these, thyroid, parotid gland, stomach, ovary, cervix, uterus, prostate, bladder, nasopharynx, melanoma, bone and sarcoma can also cause endobronchial metastases¹⁻⁶.

Squamous carcinoma of the tongue is one of the most common tumors in the oral cavity. Lung metastasis is very rare in this tumor, where local relapse

and regional lymph node metastases are frequently observed. The prevalence of pulmonary metastases induced by squamous cell tongue carcinoma, among oral and maxillofacial tumors, is reported to be 2.5%⁷. Although a few cases of tongue carcinoma accompanied by pneumothorax associated with lung metastases have been reported in the literature, endobronchial tongue carcinoma involvement has been shown only in one study⁸⁻¹⁰. A case is presented of operated tongue carcinoma with cavitary lesions on radiography and endobronchial metastasis on bronchoscopy.

Case Report

A 71-year-old female patient presented with the complaint of cough and expectoration for about 2 months. She had no complaints of shortness of breath, hemoptysis or chest pain. She had a history of operation for squamous epithelial cell carcinoma of the tongue about 2 years before her presentation. She did

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Fig. 1. Posteroanterior chest radiography: cavity in the lower right zone.

not smoke. Her physical examination showed that her general condition was good, she was conscious, her cooperation and orientation were intact, and she had an operation scar on the tongue. Examination of the respiratory system revealed the presence of inspiratory rales in the right lung. There were no abnormalities in the results of routine blood tests, except for elevated erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP) values (ESR 65 mm/h, CRP 5.42 mg/dL). Her rheumatoid markers were negative. A cavity was observed in the lower right zone on posteroanterior chest radiography (Fig. 1). Her thoracic

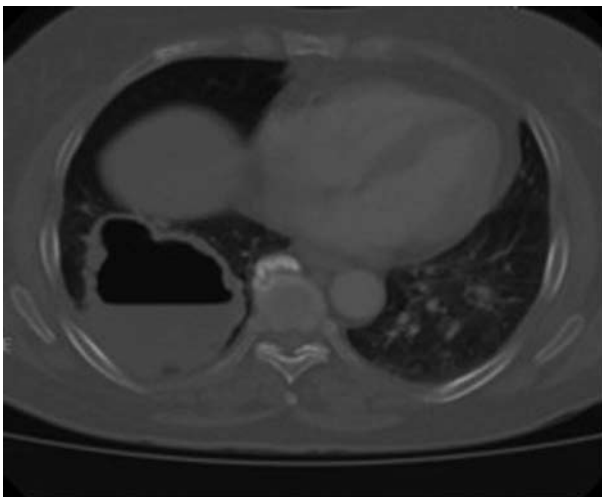


Fig. 2. Thoracic computerized tomography: cavity in the lower right lobe.



Fig. 3. Endobronchial polypoid lesion covered with necrotic tissue in the intermediary bronchus.

computed tomography (CT) showed a big cavity in the lower right lobe (Fig. 2). Also, there were multiple nodular opacities in both lung parenchymas on CT. In her bronchoscopic evaluation, the upper right lobe and segment ends were open. In the intermediary bronchus, there was an endobronchial polypoid lesion covered with a white necrotic material that obstructed the passing of the bronchoscope (Fig. 3). Bronchial lavage ARB and mycobacterium cultures were negative. The result of endobronchial lesion biopsy was reported as squamous epithelial cell carcinoma. In the case which was assessed with tongue biopsy speci-

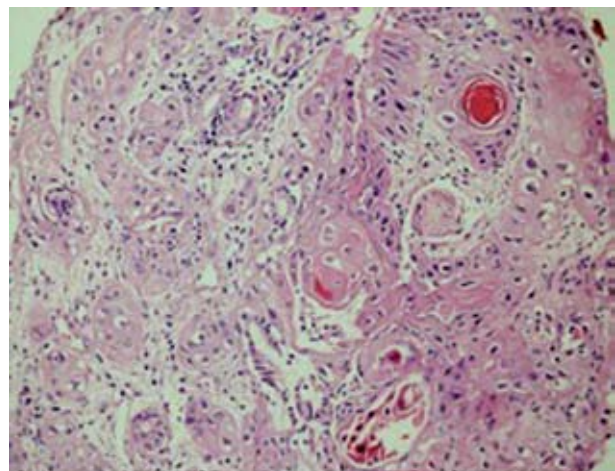


Fig. 4. Pathologic evaluation of the endobronchial lesion biopsy revealed a subepithelial tumor that did not show continuity with surface epithelium, which lacked precancerous lesions, and similar morphology of the squamous epithelial cell carcinomas in all locations.

mens, the focus in the lung was evaluated as a metastasis of tongue malignancy due to the presence of a subepithelial tumor that did not show continuity with surface epithelium and lacked precancerous lesions, and similar morphology of squamous epithelial cell carcinomas in all locations (Fig. 4). Upon consultation with the ENT Department, there was no finding of local recurrence. The patient was referred to the Medical Oncology Department for chemotherapy due to widespread metastatic nodules of the lung. However, the patient's symptoms worsened and she died because of hemoptysis and respiratory insufficiency 3 months after the diagnosis.

Discussion

We describe a patient previously operated for tongue carcinoma that presented with cavitary and nodular lesions on chest radiography and endobronchial metastasis by bronchoscopic evaluation.

Although lung metastases of malignant tumors are very frequent, endobronchial metastases with primary involvement of bronchial epithelium are rarely seen. In the treatment of patients with endobronchial lesion, it is important to distinguish whether the lesion is associated with the primary lung cancer or it is a metastasis. In most cases, the clinical, radiological and bronchoscopic features are similar to those of lung cancer. Thus, it is important to carry out histopathologic evaluation and comparison of endobronchial lesion and primary tumor². In the present case, the result of the endobronchial lesion biopsy was compared with the patient's tongue biopsy specimens, and squamous epithelial cell carcinoma was reported as a metastasis of tongue malignancy.

The main symptoms observed in most cases of endobronchial lesion include coughing, shortness of breath and hemoptysis³. Our patient also complained of coughing. In addition, 20%-62.5% of the patients with endobronchial lesion were shown to be asymptomatic in a few studies^{1,2,6}. This finding indicates that the clinicians should also consider endobronchial involvement in the presence of respiratory complaint in a patient with a history of malignancy diagnosis, and that such patients should be regularly followed up, even if they report no complaints.

The most frequent radiological findings in a patient with endobronchial lesion are single or multiple

nodules with hilar distension, presentation of mass, and atelectasis^{1,3,7}. In our case, nodules with bilateral cavitation and abscess formation were observed. Although the radiological image may indicate an underlying infection or vasculitis, the possibility of metastasis should be considered in patients with malignancy.

Squamous epithelial cell carcinoma is one of the most common tumors of the oral cavity. In a study conducted by Takagi *et al.*, autopsy results of 83 cases with squamous cell tongue cancer were evaluated and it was shown that the frequencies of remote lymph node and hematogenous metastases were 35.4% and 58.5%, respectively, and hematogenous metastasis was most commonly seen in the lung tissue (52.4%)¹¹. The frequency of pulmonary metastasis was reported to be lower in Wu's study. On the evaluation of the records of 685 patients with malignant tumor diagnosis in the oral and maxillofacial area, 70 (10.2%) cases had pulmonary metastasis. The origin of pulmonary metastasis was as follows: 33.3% tongue base carcinoma, 47.8% adenoid cystic carcinoma, 26.5% adenocarcinoma and 2.5% squamous cell carcinoma⁷. There was only one reported case of tongue carcinoma with endobronchial involvement⁸.

Treatment approaches for squamous cell carcinomas of the oral cavity include single management with surgery, radiotherapy, as well as adjuvant systemic therapy (chemotherapy and/or target agents); various combinations of these modalities may also be used depending on the disease presentation and pathologic findings¹². Tongue squamous cell cancers are aggressive tumors. While 5-year post-metastasectomy survival rate is 30% in cases with pulmonary metastases associated with squamous cell carcinoma among head and neck tumors, survival is poor in metastases associated especially with tongue cancer. Therefore, metastasectomy is not recommended in metastases induced by tongue carcinoma¹². In the study conducted by Hsu *et al.*, a patient was reported dead due to respiratory failure 5 months after the diagnosis⁹. Similarly, our patient died because of hemoptysis and respiratory failure 3 months after the diagnosis.

Consequently, the evaluation of this case indicates that the possibility of endobronchial metastasis should not be ruled out in a patient with underlying malignancy, even in the presence of atypical radiological findings, and bronchoscopic intervention should be planned.

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Sažetak

KARCINOM JEZIKA S ENDOBRONHIJALNOM METASTAZOM: RIJEDAK SLUČAJ

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Endobronhijalne metastaze ekstrapulmonalnih zloćudnih tumora vrlo su rijetke. Prikazuje se bolesnica s endobronhijalnom metastazom, koja je prethodno operirana zbog karcinoma jezika. Bolesnica u dobi od 71 godine žalila se na kašalj. Anamneza je pokazala da je bolesnica bila operirana zbog karcinoma jezika dvije godine ranije. Rentgenografijom prsišta otkrivena je razina zraka i tekućine u donjem dijelu desnog hemitoraksa. Nađena je velika kavitarna lezija u desnom donjem režnju te obostrano višestruke nodularne lezije od kojih su neke pokazale stvaranje kaviteta na kompjutoriziranoj tomografiji. Bronhoskopski je otkrivena polipoidna lezija nekrotičnog izgleda, a patološki je opisana kao karcinom pločastih stanica. Nakon procjene materijala prethodno uzetog tijekom operacije jezika zaključeno je da lezija predstavlja metastazu podrijetlom iz karcinoma jezika. Nijedan nalaz nije upućivao na lokalni recidiv karcinoma, a bolesnica je umrla od hemoptize i respiracijske insuficijencije. U zaključku, na endobronhijalne metastaze treba misliti kod bolesnika s ekstrapulmonalnim zloćudnim bolestima i provesti bronhoskopski pregled, čak i kod atipičnih radioloških nalaza.

Key words: *Jezik, tumori; Tumorske metastaze; Bronhijalni tumori, sekundarni; Prikazi slučaja*