



CASE REPORT

Tracheal metastasis of lung adenocarcinoma

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Abstract

A 46-year-old female presented with dyspnea, dysphagia, and throat irritation with a diagnosis of tracheal metastasis resulting from a previously resected lung adenocarcinoma. Upper airway metastasis has a poor prognosis and is rarely observed. The clinical presentation manifests with cough and hemoptysis in most cases. Treatment includes surgical metastatic removal associated with combined radiotherapy and chemotherapy.

Keywords: lung adenocarcinoma; neoplastic metastases; lung neoplasms.

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Introduction

Non-small cell carcinomas of the lung with histopathologic classification of moderately differentiated are characterized by early appearance of metastases. Upper airway metastasis is rarely observed and has a poor prognosis. This case report refers to such a condition.

Tumors of the head and neck, kidney, breast, and large intestine are the solid tumors that most frequently present with endobronchial dissemination¹.

This study aims to describe a rare case of tracheal metastasis of lung adenocarcinoma as a late manifestation after treatment in a municipality located in the northern plateau of the state of Santa Catarina, Brazil.

Case report

Female patient, aged 46 years, ex-smoker, submitted to lobectomy five years ago for lung adenocarcinoma with mucinous pattern and probable origin in the gastrointestinal tract, described in histopathology. The patient reported dyspnea on exertion, dysphagia, and throat irritation. Fiberoptic bronchoscopy showed an endoluminal lesion of the trachea with 75% stenosis and adenocarcinoma on biopsy. Staging CT scans confirmed a neoplastic lesion with reduction of the tracheal lumen without presence of another lesion, indicating a new primary metastatic focus. In view of these findings, a segmental tracheostomy was performed with tracheoplasty and

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right isthmolobectomy (Figure 1) for tracheal adenocarcinoma with clear margins for the invasive adenocarcinoma, but with adenomatous goiter in the right lobe. The patient underwent orotracheal intubation for three days postoperatively, and subsequent resection of skin redundancy on the scar five months after tracheotomy. The patient also reported pain in the cervical region two months after surgery, but a CT scan showed unchanged nodules, and total abdominal CT scan found only hepatic and renal cysts. Anatomopathological investigation confirmed the findings of the preoperative biopsy and immunohistochemistry. The diagnosis was tracheal metastasis of lung adenocarcinoma.



Figure 1. Tracheoplasty with simple suture of the trachea, performed after segmental resection with the adenocarcinoma.

Discussion

Endobronchial metastasis of carcinoma is usually accompanied by synchronous metastatic dissemination, a sign of advanced disease and poor prognosis, with very short survival^{1,2}.

Endobronchial metastases occur randomly in the respiratory tree². The clinical presentation is similar to that of primary lung carcinoma, with cough and hemoptysis occurring in most cases^{1,3}, while chest pain, dyspnea, and wheezing are less frequent findings²⁻⁴.

According to Baumgartner and Mark⁵, treatment should be defined individually based on the primary tumor, severity of symptoms, and systemic extension

of the disease. In this case report, resolution occurred through histological identification, anatomical location and biological behavior of the primary tumor, with resection and subsequent oncological follow-up using combined radiotherapy and chemotherapy (Figure 2). Surgical removal of metastasis associated with palliative oncological therapy seems to be the option that allows the best quality of life for patients, with longer time free of symptoms. However, the presence of metastatic manifestation in the trachea is scarcely described in studies addressing this pathology.



Figure 2. Macroscopic image of the surgical specimen that was sent for anatomopathological examination showing a segment of the trachea with adenocarcinoma on the right, right lobe, and isthmus of the thyroid gland on the left.

Conclusion

In this case report, the patient presents a rare condition, but the conduct carried out by the physician obtained satisfactory results. The patient is stable and undergoing oncological follow-up, which began in August 2021, with CT scans every four months to monitor the evolution of the resected area. The last CT scan was performed in May 2022, and the resected area presented stability and no changes.

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