

## Hemoptysis in a Patient with Melanoma and Pulmonary Infiltrates

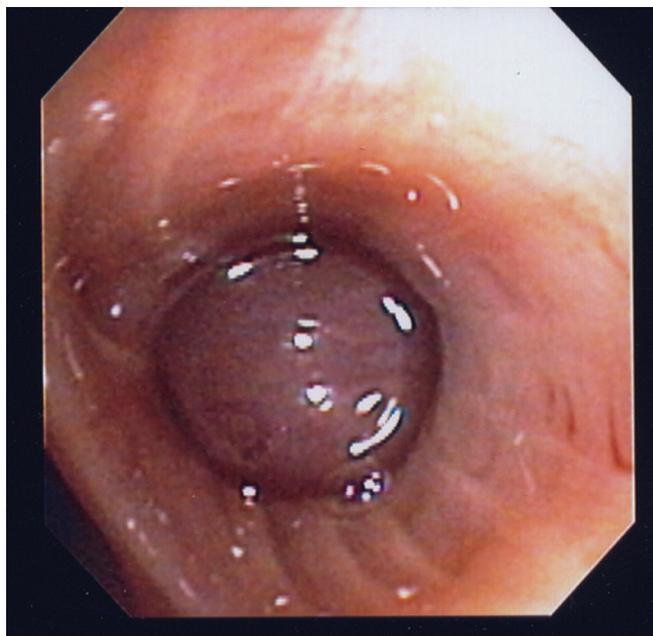
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An 85-year-old white man with known history of melanoma was referred to the Interventional Pulmonary service for hemoptysis. Review of recent imaging revealed nodular infiltrates without significant volume loss. Bronchoscopy was performed revealing glistening polypoid endobronchial masses obstructing the apical-posterior segment (B<sup>1+2</sup>) of the left upper lobe and anterior segment of the right upper lobe (B<sup>3</sup>) (Figure 1). Bronchoscopic needle aspiration and biopsy were performed. Argon plasma coagulation was then undertaken with successful ablation and subsequent patency of the involved segments (Figure 2).

Lung metastases from malignancy other than bronchogenic carcinoma are a common occurrence with the incidence ranging from 20 to 50%.<sup>1</sup> Although the incidence for endobronchial metastasis has been reported to be from about 2 to 28%, a retrospective review of 1359 autopsies revealed only 2% of patients dying with solid tumors to have metastatic involvement of the central airways.<sup>2</sup> Metastases from primary malignancy are traditionally described to spread via a hematogenous or lymphatic route, however, tracheal or bronchial obstruction due to endobronchial metastasis is rare, and must be differentiated from obstruction caused by an extrinsic mass. Although frequently asymptomatic (52%), endoluminal metastasis may commonly present with cough, wheezing, dyspnea, and hemoptysis as was present in our patient. Radiographic findings may include lobar or segmental atelectasis. Endoluminal metastasis may signal slow disease progression and have a median lag time of up to 5 years or more dependent upon the underlying primary malignancy.<sup>3</sup> Renal cell carcinoma is thought to be the most frequent etiology of endobronchial metastasis with other tumors to include melanoma, lymphoma, breast, larynx, thyroid, and colon. Primary melanoma of the airway with tracheal ob-

struction and diffuse melanosis of the airways without associated skin or mucous membrane pigmentation has also been described. Rare patients with bronchial obstruction associated with malignant melanoma have been reported, as was true in our patient. Appropriate diagnosis should be performed to exclude the potential of a second primary. Endobronchial biopsies are easily obtained, however, as certain tumors are noted for a propensity toward significant bleeding, such as renal cell carcinoma and melanoma, initial sampling may easily be performed by means of endoluminal needle aspiration described by Wang et al.<sup>4</sup> Management of bronchial metastases is symptom based. Historically, if the obstructing mass could be localized by imaging studies, external beam radiotherapy, or surgery was employed to palliate the obstruction. It is currently reasonable to attempt to relieve obstruction by laser endoscopy, argon coagulation, or photodynamic therapy. Endobronchial brachytherapy has sometimes been attempted with some success although late toxicity with bronchial wall necrosis has been attributed to contact between the catheter and bronchial wall mucosa. It should be



**FIGURE 1.** Metastatic melanoma presenting as obstructing endobronchial polypoid mass.

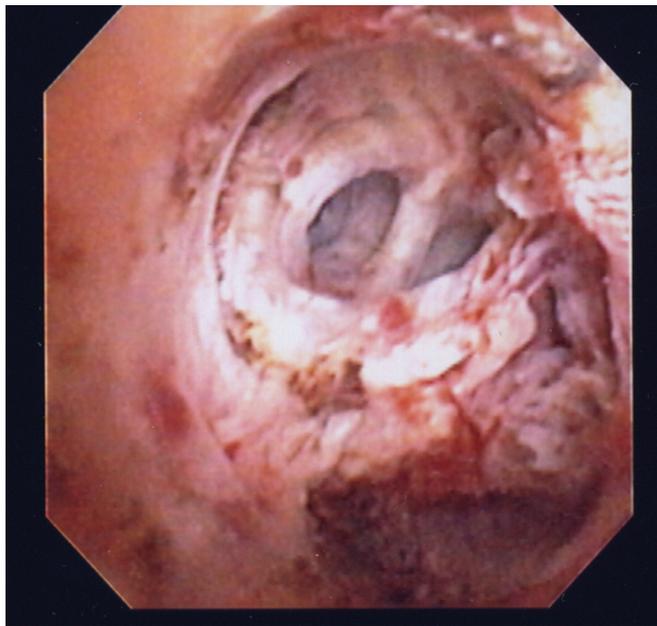
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**FIGURE 2.** Patent segmental bronchus subsequent to argon plasma coagulation ablation.

noted that the intent of such treatment is to palliate symptoms, as overall prognosis of the patient is determined by the nature of the neoplasm causing bronchial metastasis. Palliation of lung symptoms may improve performance status enough to allow more aggressive systemic therapy.

In summary, the potential for endobronchial metastasis in patients with melanoma should be investigated in those patients with new or worsening pulmonary symptoms and signs. Further investigation into molecular markers for help in the characterization of which patients may have an increased incidence for such metastasis should be considered.

#### REFERENCES

1. Froudarakis ME, Bouros D, Siafakas NM. Endoluminal metastases of the tracheobronchial tree: is there any way out? *Chest* 2001;119:679–681.
2. Braman SS, Whitcomb ME. Endobronchial metastasis. *Arch Intern Med* 1975;135:543–547.
3. Heitmiller RF, Marasco WJ, Hruban RH, et al. Endobronchial metastasis. *Thorac Cardiovasc Surg* 1993;106:537–542.
4. Wang KP, Mehta A, Turner JF. Transbronchial needle aspiration for cytology and histology specimens. In Wang KP, Mehta A, Turner JF, (Eds.), *Flexible Bronchoscopy*, 2nd Ed. Blackwell Science, 2004; Pp. 117–137.