Thoracic vertebrae are the most commonly involved sites in patients with plasmocytoma of bone. Localized radiotherapy is the treatment of choice. However, surgical treatment is indicated when patients present with pain, structural instability of the bone, or neurologic compromise. Excellent postoperative results in neurologic recovery, pain relief, and spine stability have been reported [3, 4].

Amyloidosis usually presents in a systemic form. Localized amyloidosis in soft tissues is a rare entity. Tumor-like localized amyloid deposits, also called amyloidoma, are even less common, and we only found three reports of amyloidoma of the chest wall [2, 5, 6]. Primary amyloidoma of the chest wall presents like an aggressive tumor that causes local destruction. It is best treated with wide local excision and reconstruction of soft tissue and bone, which usually is curative [7].

Localized amyloidosis can be a feature of solitary plasmocytoma of bone, and it is hypothesized that the former is secondary to the latter process. Primary amyloidosis (amyloid light-chain type) is due to deposition of protein derived from immunoglobulin light-chain fragments, as seen in patients with plasma cell dyscrasia. The exact pathogenesis of amyloidoma of the chest wall is unclear, however [3]. Polarized microscopy of the specimen from our patient revealed a transition of plasma cell infiltrate into a tumor-like amyloid deposit. Overall, the clinical and radiographic features strongly argue for a reactive process and suggest that the localized amyloidosis is secondary to plasmocytoma of bone, which is only rarely found [5].

However, myeloma develops in most patients with apparent solitary plasmocytoma of bone, with a median time to progression of 2 to 4 years [1], which is why these patients also require medical follow-up. Complete surgical resection with stabilization and reconstruction of spine and chest wall as required should be performed in selected patients. Although long-term analysis is missing for this intensive approach, surgical resection provides best local control, with negligible local recurrence rate and immediate spine stability [1, 3, 5].

References

Endobronchial Valve Placement for Spontaneous Pneumothorax From Stage IIIA Non-Small Cell Lung Cancer Facilitates Neoadjuvant Therapy
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Spontaneous pneumothorax has previously been described as a presenting symptom of lung cancer. This presentation can, unfortunately, complicate and delay further definitive onologic care until the pneumothorax can be effectively managed. We describe the case of a 58-year-old man who presented with secondary spontaneous pneumothorax and persistent air leak related to his primary...
lung carcinoma. Endobronchial valve placement allowed for the avoidance of pleurodesis, timely discharge, and neoadjuvant chemotherapy, followed by definitive surgical resection.


The initial presentation of a pneumothorax in patients with other radiographic abnormalities demands further and expeditious evaluation while simultaneously managing their pleural disease. In the rare patient presenting with pneumothorax and lung carcinoma, the immediate diagnostic and therapeutic decisions must be made in the context of the patient’s future long-term oncologic treatment goals.

A 58-year-old male smoker with no prior medical history experienced acute dyspnea. A chest roentgenogram revealed a large right pneumothorax (Fig 1). Tube thoracostomy was performed. A repeat chest roentgenogram after chest tube placement demonstrated resolution of the pneumothorax but showed a large right upper lobe mass concerning for malignancy (Fig 2).

The physical examination revealed a well-developed man in no acute distress. A continuous air leak on suction was identified. Computed tomography showed proper chest tube placement and confirmed the presence of a large right upper lobe mass with mediastinal and hilar lymphadenopathy. Mediastinal staging by endobronchial ultrasound-guided transbronchial needle aspiration demonstrated non-small cell lung carcinoma at station 4R.

Multidisciplinary consultation with interventional pulmonology, medical oncology, radiation oncology, and thoracic surgery considered potential treatment options for his newly diagnosed stage IIIA lung cancer and management options for the persistent air leak. Avoidance of pleurodesis was desired due to potential future plans for surgical resection, but immediate resection in the setting of known stage IIIA disease would likely be associated with a poor oncologic prognosis.

The air leak persisted, and flexible bronchoscopy with balloon occlusion (B5-2C, Olympus, Center Valley, PA) was performed on hospital day 10 to localize the site of the leak. Balloon occlusion of the anterior segment of the right upper lobe during positive-pressure ventilation produced cessation of the air leak. A 7-mm and a 6-mm endobronchial valve (Spiration, Redmond, WA) were placed into the anterior segment of the right upper lobe, with significant reduction of air leak.

The chest tube was removed within 48 hours, and the patient was discharged home. Both endobronchial valves were removed 6 weeks later without incident (Fig 3).

Neoadjuvant chemotherapy was administered, and repeat imaging with positron-emission tomography-computed tomography showed mild 2-deoxy-2-18F-fluoro-D-glucose (FDG) avidity of the mediastinal nodes with a positive volumetric response.

Mediastinoscopy revealed absence of persistent disease in the 4R, 7, and 4L nodal stations on frozen section analysis. Autofluorescence and white light bronchoscopy demonstrated tumor at the right upper lobe orifice with mucosal abnormality of the right secondary carina. A right thoracotomy, upper lobe sleeve lobectomy and mediastinal lymphadenectomy were performed without complication, and the patient was discharged home on day 4.

The final pathologic analysis revealed evidence of persistent disease in 1 of 4 lymph nodes at station 4R from...
the lymphadenectomy sample (ypT2a N2 M0, stage IIIA non-small cell lung carcinoma, squamous cell carcinoma). All margins were uninvolved by tumor (R0 resection). He subsequently completed adjuvant chemotherapy and radiotherapy.

Comment

Secondary spontaneous pneumothorax has been previously described as an initial presentation of lung cancer [1, 2] and is, unfortunately, associated with poor survival [3]. Current treatment options for persistent air leaks often involve prolonged tube thoracostomy drainage, pleurodesis, and surgical repair; however, these may preclude or complicate subsequent potentially curative surgical resection [4, 5] as well as significantly delay initiation of oncologic care. We present the first reported use of endobronchial valves in the setting of pneumothorax related to primary lung carcinoma used as a means to avoid pleurodesis and prolonged hospitalization.

Endobronchial valves are currently approved by the United States Food and Drug Administration as a humanitarian use device in the setting of persistent air leak after pulmonary resection. In addition, numerous case reports exist for their use in etiologies of persistent air leak, including bronchopleural fistula causing empyema [6], spontaneous pneumothorax [7], and as a bridge for lung transplantation [8].

Our multidisciplinary thoracic oncology team pursued endobronchial valve placement in this patient with secondary spontaneous pneumothorax from stage IIIA non-small cell lung carcinoma and a prolonged air leak. This strategy allowed for a minimally invasive method to expedite resolution of his air leak, permit earlier hospital discharge, and preserve the integrity of the pleural space in anticipation of providing a safer surgical resection after neoadjuvant therapy.

References


Right Lower Lobectomy With Middle Lobe Preservation After Right Upper Lobectomy in Lung Cancer of the Right Lower Lobe

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A 73-year-old woman who underwent right upper lobectomy for tuberculosis 40 years earlier was diagnosed with adenocarcinoma, clinical stage IIA (T2bN0M0), in the right lower lobe of her lung. A lower lobectomy with preservation of the middle lobe was performed. The patient had an uneventful recovery. She is alive without signs of recurrence or requirement for additional oxygen support 6 years after the operation.

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Reports of right upper and lower lobectomy with preservation of the middle lobe are rare because of the risk of middle lobe torsion or emphysematous change. We describe a good outcome in a case of...