The Tissue is the Issue: Primary Amyloidosis in a Lymphoma Patient

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Introduction

- Amyloid light chain (AL) amyloidosis results from misfolded immunoglobulin light chains secreted by clonal plasma cells
- Commonly affected organs: heart, kidneys, liver, and GI tract.
- Pulmonary involvement is rare and can present as diffuse or nodular disease.
- Coexistence of AL amyloidosis and lymphoma, particularly in the lung, is uncommon.
- This case highlights the importance of tissue diagnosis in patients with known malignancy presenting with new pulmonary findings.

Case Presentation

A 69-year-old female presented with a 2-month history of progressive lower extremity weakness and sudden onset dysphagia and chest pain. She was found to have pleural effusions and underwent thoracentesis and chest tube placement where imaging showed multiple enhancing opacities that were concerning for possible infection or malignancy.

- Imaging & Initial Findings:
  - Bilateral pleural effusions, multiple enhancing lung opacities
  - Enhancing posterior lung/pleural mass with epidural extension (T5–T10)
  - Thoracentesis and chest tube placement performed
- Diagnosis:
  - Laminectomy and biopsy
  - IHC: CD20+, CD79a+, PAX-5+, CD10+, BCL-6+
  - Diagnosis: Diffuse Large B-Cell Lymphoma (DLBCL)

After a full course of radiation consisting of 2000 cGy over 5 treatments, 6 cycles of Pola-R-CHP therapy was initiated. Further PET/CT scans also revealed the patient still had innumerable non-hypermetabolic calcified and non-calcified nodules throughout both lungs after 5 cycles. The largest of which was biopsied and sent for analysis which revealed AL (lambda)-type amyloidosis.

- New Findings
  - Pathology: AL (lambda)-type amyloidosis
  - Labs: mild kappa light chain elevation, normal FLC ratio
  - No evidence of systemic amyloidosis
  - Diagnosis: localized nodular pulmonary amyloidosis
  - Managed with clinical surveillance

The patient completed chemotherapy with complete response on PET scan. Unfortunately, in March, 2025 the patient presented with altered mental status. A mass was detected on brain imaging. CSF showed lymphoma cells and chemotherapy was reinitiated. She completed 6 cycles of RMVP and is in remission. She is completing consolidation chemotherapy with cytarabine

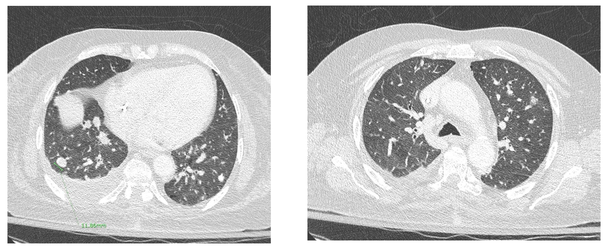


Figure 1. Axial view displaying largest pulmonary nodule in right lower lobe (Left) and multiple nodules in upper lobes (Right)

Discussion

- Key Points:
  - Pulmonary AL amyloidosis is rare and may mimic infection or malignancy.
  - In oncology patients, not all pulmonary nodules are malignant.
  - Biopsy is essential to confirm diagnosis and guide management.
  - Localized pulmonary amyloidosis often requires no immediate intervention.
  - Multidisciplinary care (oncology, pulmonology, pathology) is crucial in complex cases.
- Takeaway Message:
  - In cancer patients, especially those with lymphoma, new or persistent lung lesions must be investigated thoroughly.
  - Histopathologic confirmation ensures accurate diagnosis and prevents overtreatment.