

## AN UNCOMMON MALIGNANT PLEURAL EFFUSION

I. Acosta-Sanchez<sup>(1)(2)</sup>, K. Camargo Macias<sup>(1)(2)</sup>, A. Madanieh<sup>(1)(2)</sup>, C. Orabi<sup>(1)(2)</sup>, J. Otoyá<sup>(2)</sup>.

<sup>1</sup> Department of Internal Medicine. University of Central Florida College of Medicine, Orlando, FL.  
Osceola Regional Medical Center, Kissimmee, FL.

<sup>2</sup> Department of Hematology and Oncology, Osceola Regional Medical Center, Kissimmee, FL.

Malignant pleural effusions (MPE) are usually related to metastatic malignant tumors, most commonly from lung cancer and breast cancer, in men and women respectively (2). We report a case of primary pleural low-grade B-cell lymphoma presenting with a right pleural effusion, which management differs from other etiologies of MPE.

### Case description

The patient is an 84-year-old man with a past medical history of laryngeal cancer and atrial fibrillation, who presented to the emergency department with progressive exertional shortness of breath associated with dry cough and onset of right-sided pleuritic chest pain the past 3 days. Review of Systems was otherwise negative. Social history was non-contributory. On physical examination he was in mild-to-moderate respiratory distress, tachycardic, tachypneic and afebrile, with decreased breath sounds and dullness to percussion over the right hemithorax. Chest radiograph revealed a large right-sided pleural effusion (Fig. 1). Thoracentesis was performed and one and a half liters of cloudy exudative fluid was drained. Repeat radiograph showed adequate interval lung re-expansion (Fig. 2). Cytology analysis demonstrated low grade B cell lymphoma with CD20 positive. Staging CT/PET scan and bone marrow biopsy were normal. The patient was started on rituximab and bendamustine with no intrapleural catheter (IPC) placement after the oncologist and pulmonologist were consulted. There were no immediate complications or recurrence of pleural effusion and the patient was discharged home with outpatient follow up.

### Discussion

Malignant pleural effusions are the second leading cause of exudative effusions, after parapneumonic effusions, with over 125,000 hospital admissions and over \$5 billion expenses per year in the United States. Pleural involvement by metastatic cancers including lymphoma is common. However primary pleural lymphoma remains an extremely rare condition, representing only 7% of all lymphomas. From all the reported cases, diffuse large B-cell lymphoma represents nearly 60%, and low-grade B-cell lymphoma represents about 1.34%.

Recent guidelines published by the American Thoracic Society (ATS) regarding management of malignant pleural effusion consider lung re-expansion and life expectancy before moving forward with therapeutic interventions. Outweighing benefits and risks regarding IPC, pleurodesis and combination of both should be discussed with patients and the multidisciplinary teams including pulmonary and oncology for the benefit of the patients. As in our case, due to the highly sensitive chemotherapeutic response of his lymphoma, the patient benefited from holding any unnecessary interventional procedures, avoided increased risk of infection, periprocedural complications and limitation of daily activities. Chemotherapy was initiated with close monitoring for newly developing pleural effusion.

We submit a unique case of primary pleural low-grade B cell lymphoma presenting with large malignant pleural effusion in which management can differ from recommended guidelines. This also outlines the importance of multidisciplinary approach to avoid unnecessary procedures with better outcomes for patients with this condition.



Fig. 1. Chest radiograph outlining large right-sided pleural effusion.



Fig 2. Chest radiograph demonstrating adequate lung re-expansion after thoracentesis.