CHEST

A 68-Year-Old Man With Chronic Myelogenous Leukemia and a Large Unilateral Pleural Effusion

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CASE PRESENTATION: A 68-year-old man with chronic myelogenous leukemia presents for evaluation of 2 months of dyspnea with exertion. He denies cough, fever, chest pain, weight gain, orthopnea, and edema. Since diagnosis of chronic myelogenous leukemia 5 years ago, he has been treated with dasatinib, with recent BCR-ABL1 assay showing no detectable disease in the peripheral blood. Medical history also includes hyperlipidemia, prostate enlargement, and hypothyroidism, but no prior heart or lung disease. Born in the Middle East, he immigrated to the United States 30 years ago and is working as a physician. He received the Bacillus Calmette–Guérin vaccine as a child. Quantiferon Gold test 1 year ago was positive (TB antigen response 0.91, reference range in <0.35), but he has not received treatment for this. He is a lifelong nonsmoker and rarely drinks alcohol. Medications include dasatinib, rosuvastatin, levothyroxine, tamsulosin, and dutasteride. CHEST 2018; 153(2):e33-e36

Physical Examination Findings

On examination, he appears well with normal vital signs and an oxygen saturation of 97% on room air. Decreased breath sounds were auscultated over the left chest base.

A metabolic panel and CBC were normal, with WBC of 4,100 μL, 55% neutrophils, 33% lymphocytes, and 2% eosinophils. An ECG was normal. A chest radiograph was performed (Fig 1). He was referred for a thoracentesis, with left chest ultrasound demonstrating a large, anechoic pleural effusion (Fig 2). Thoracentesis yielded 2,500 mL of slightly turbid dark red liquid. Pleural lactate dehydrogenase (LDH) was 144 (serum LDH, 190) and pleural protein was 4.3 (serum protein, 7.4). Cell count showed RBC 7,000 μL, nucleated cells 4,900 μL with 4% neutrophils, 76% lymphocytes, 5% monocytes, 14% mesothelials, and 0% eosinophils with negative cytology and microbial studies. Triglycerides were 14 mg/dL.

Figure 1 – *Chest radiograph showed a left sided pleural effusion.*

ABBREVIATIONS: LDH = lactate dehydrogenase; NK = natural killer cell; TKI = tyrosine kinase inhibitor

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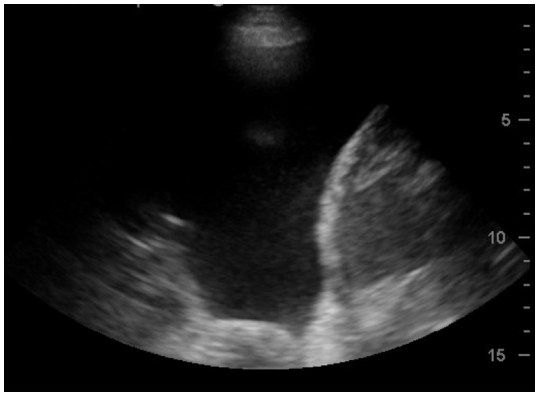

Figure 2 – *Ultrasound of the left chest showed a large anechoic pleural effusion.*

What is the diagnosis?