

Introduction

Patients with cutaneous T cell Lymphoma commonly present with extensive skin involvement. Additionally, these patients can present with extracutaneous disease in other organ systems including the lungs, which clinically can be a diagnostic challenge in the setting of immunosuppression.

Case Presentation

52 YO M w/ CD30+ T Cell Lymphoma resistant to standard chemotherapy (CHOEP and BV-CHOP) and second-line chemotherapy (lenalidomide) presented to the hospital with a one-month history of diffuse rash and shortness of breath. The rash presented on the patient's face, back, arms, and legs, with multiple nonpruritic nonpainful nodular cutaneous and subcutaneous lesions.



Image 1: Multiple nodular cutaneous and subcutaneous lesions seen here on the patient's back

On presentation, the patient was febrile and required 10L/min of oxygen to maintain O₂ saturations above 92%. Laboratory results were significant for WBC 64.6x10⁹/L (78% neutrophils) and a lactate of 5.4 mmol/L. He had a chest CT scan performed which demonstrated bilateral consolidations and ground glass opacifications primarily concerning for multifocal pneumonia.

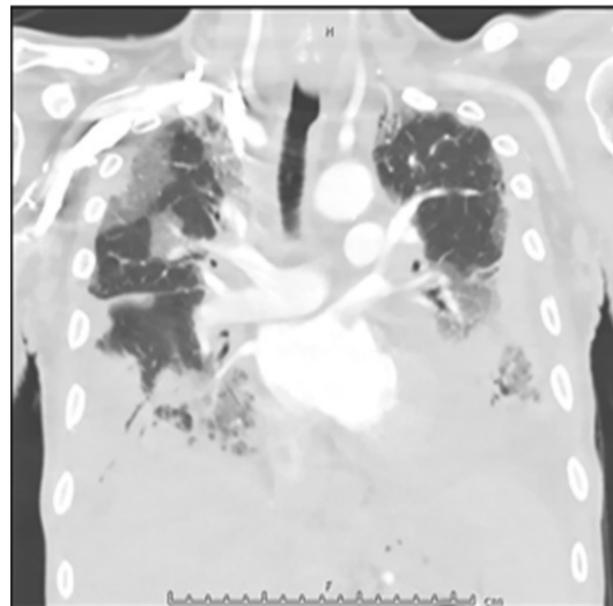


Image 2: Chest CT scan with bilateral consolidations and ground glass opacifications

Given his immunosuppressed state, he was empirically treated with broad spectrum antibiotics with coverage for resistant organisms such as Pseudomonas and MRSA. He was also empirically covered for Pneumocystis jirovecii and opportunistic fungal infections. Despite treatment, the patient's condition rapidly worsened, requiring initiation of mechanical ventilation for hypoxic respiratory failure. He underwent bronchoscopy with bronchoalveolar lavage (BAL). BAL cultures were negative, however cytology demonstrated abnormal mononucleated T-cells consistent with patient's known diagnosis of T Cell lymphoma.

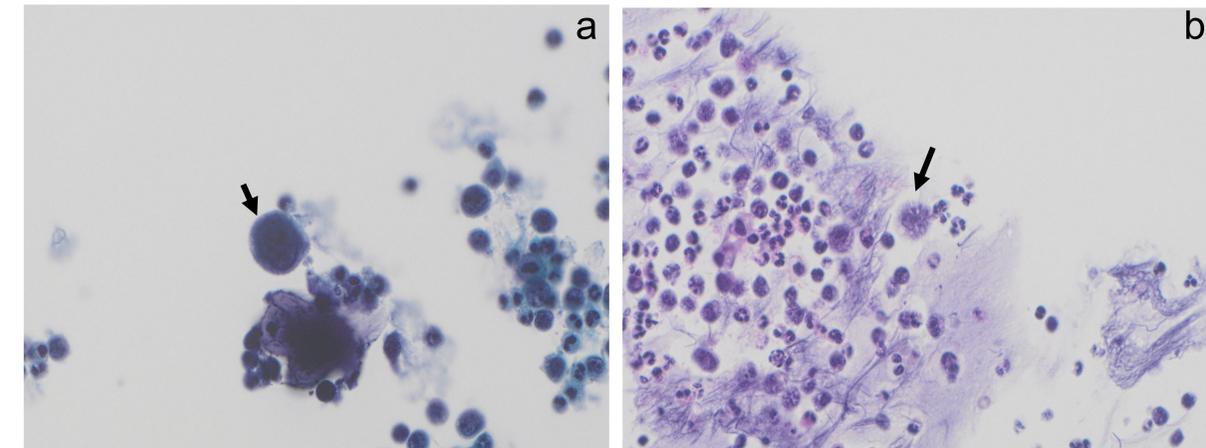


Image 3:

- a) BAL, Papanicolaou Stain, 60x: Enlarged macro nucleolar cells with very high N/C ratio and hyperchromatic convoluted nuclei (noted by arrow).
- b) BAL, H&E Stain, Cell Block, 60x: In Inflammatory background, there are atypical macro nucleoli cells with high N/C ratios and prominent irregular nucleoli. Note the hyper convoluted nucleolus characteristic of T Cell Lymphoma (noted by arrow)

At this point, antibiotics and antifungal medications were discontinued as a diagnosis of pulmonary involvement with T cell lymphoma was considered. Unfortunately, the patient's condition continued to deteriorate, and he was eventually placed under hospice care.

Discussion

This case illustrates the importance in maintaining a broad differential for a patient with cutaneous T-Cell Lymphoma presenting with fever and shortness of breath. Lung involvement is one of the known extracutaneous manifestations of cutaneous T cell lymphoma and is almost always seen with advanced cutaneous lesions, as seen in this patient (likely tumor variant mycosis fungoides). Unfortunately, presence of extracutaneous manifestations is also representative of advanced disease, prognosis is guarded and treatment options in these patients are limited. Additionally, in these severely immunosuppressed patients, it is always important to consider empiric treatment for opportunistic infections.

