CLINICAL VIGNETTE

Digging Deeper than Lupus – Angioimmunoblastic T-cell Lymphoma Presenting as Lupus

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Background

T-cell lymphoma has several features that can be misdiagnosed as autoimmune disease.[1] Late-onset lupus can have insidious onset, with symptoms overlapping with those of lymphoma. We describe a patient with initial strong concern for systemic lupus erythematosus, which subsequently was revealed to be due to a malignancy.

Case Presentation

A 67-year-old female with chronic obstructive pulmonary disease presented to rheumatology with dyspnea on exertion, nausea, vomiting and generalized weakness, progressive over four months. Her review of systems was also positive in multiple areas. Symptoms included: pruritus, intermittent rashes, painful oral ulcers, dry eyes and mouth, Raynaud's phenomenon of the hands and feet, alopecia, fatigue, low-grade fevers, and photosensitivity, which escalated to a total body rash, joint pain and swelling in the wrists, ankles and feet. Initial evaluation by her primary care physician revealed a positive antinuclear antibody (ANA). She was also diagnosed with new-onset diabetes mellitus and was started on metformin. Other notable labs included a positive measles IgM test 0.8 AU. Her rash, which had initially resolved, returned after initiation of metformin by her primary care physician. Given her positive ANA finding constellation of symptoms, she was referred to rheumatology for possible systemic lupus erythematosus.

On presentation, the patient had generalized pain and was tachycardic to 108 BPM. She appeared tremulous and somewhat frail. In addition, her exam was remarkable for: a red beefy tongue, palpable supraclavicular lymphadenopathy, 2+ bilateral lower extremity edema, and lacy, erythematous skin changes of the bilateral thighs and abdomen, consistent with livedo reticularis. She also had acral cyanosis of both feet. Her pulses were palpable throughout and her joint pain had resolved at the time of her rheumatology consultation.

Repeat laboratory studies again revealed a positive direct ANA (no titer or pattern reported), indeterminate cardiolipin IgM, positive Dilute Russell's viper venom time (DRVVT), elevated c-reactive protein to 2.1 mg/dL, and elevated sedimentation rate >100 mm/hr. Additional negative labs included rheumatoid factor, cyclic citrullinated peptide, double stranded-DNA EIA and IFA, cryoglobulin, creatine kinase, Jo-1 antibody, SSA/SSB, Smith/ribonucleoprotein antibody, complements 3 and 4, and serum and urine protein electrophoresis.

Prior outside biopsy of her rash showed superficial perivascular lymphocytic infiltrates with rare eosinophils, characteristic of dermal hypersensitivity reaction. Periodic acid–Schiff staining was negative for fungi.

Three weeks later the patient returned for follow-up. Due to extreme fatigue, nausea and vomiting, generalized weakness, fevers, and seven-pound weight loss, she was admitted to the hospital.

Evaluation after admission included diagnostic imaging. CT scans of chest, abdomen and pelvis showed small pleural effusions, with a pleural-based nodule and atelectasis, and diffuse lymphadenopathy (Figure 1). Peripheral flow cytometry showed normochromic RBCs with normal appearing leukocytes and platelets. Fine needle aspirate biopsy of supraclavicular lymph node revealed only scant tissue which was not sufficient. A small population of T-cells co-expressing CD3 and CD10 were present, but no pan-T cell marker loss was appreciated, and no monotypic B-cell population was identified. Clinical suspicion per in-patient team remained high for systemic lupus erythematosus. Prior to discharge, an excisional lymph node biopsy was performed, which revealed angioimmunoblastic T-cell lymphoma. Repeat ANA was negative. Subsequent lymphoma staging and management was initiated by oncology.

Discussion

Although an ANA titer was missing from her initial evaluation, she otherwise met the 2019 American College of Rheumatology (ACR) and European League Against Rheumatism (EULAR) classification criteria for systemic lupus erythematosus (SLE). Her positive criteria included fevers, oral ulcers, hair loss, pleural effusions, and positive antiphospholipid antibodies.[2] She also presented with fatigue, Raynaud's-like phenomenon, photosensitivity, livedoid rash, sicca symptoms, arthralgias and lymphadenopathy, with overall concerns for rheumatological disease. It is important to note that the patient's presentation with late age-of-onset, weight loss, atypical rash, lymphadenopathy and ANA positivity can also be seen with malignancy.[3] Patients with angioimmunoblastic T cell lymph-

oma typically present in their mid-60s and approximately twenty percent of patients with angioimmunoblastic T cell lymphomas have arthralgia, with up to sixty percent with a rash with their clinical presentation. After age 50, lupus is considered late-onset presentation, although this is not strictly defined. Two to twenty percent of lupus patients present after age 50, with a decrease in female predominance as compared to early-onset disease, which peaks during reproductive age.

This case illustrates the importance of maintaining high clinical suspicion for malignancy when evaluating patients for late onset lupus and avoiding premature diagnostic closure.

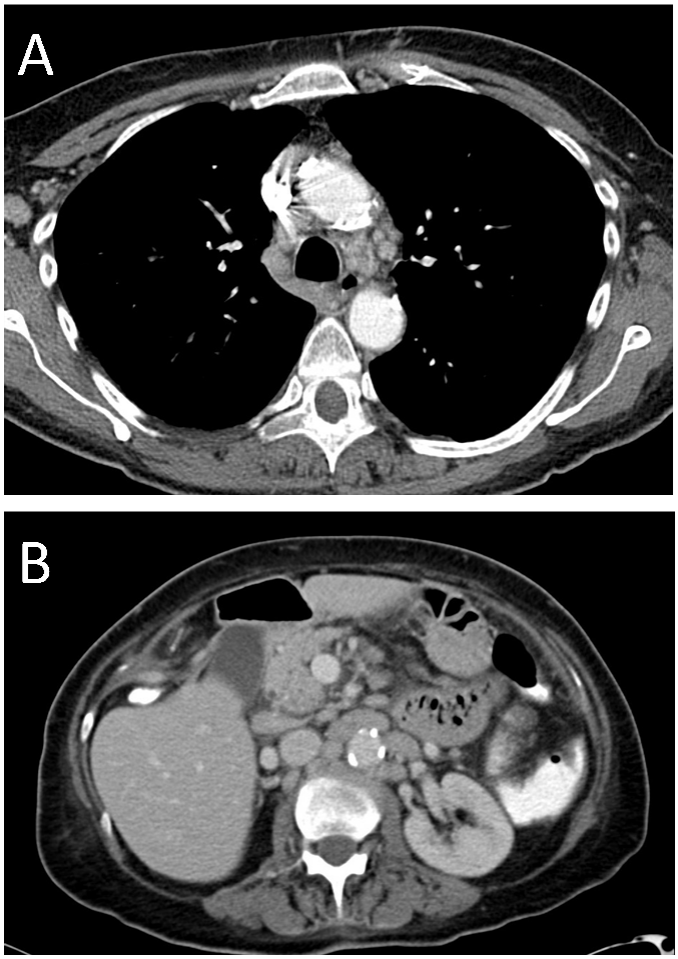

Figure 1. Computed tomography of the chest (a) and abdomen/pelvis (b) with contrast demonstrating nonspecific diffuse adenopathy.

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