College of Human Medicine
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Multiorgan Sarcoidosis Mimicking Metastatic Lymphoma: A Diagnostic Challenge

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Introduction

Lymphoma is a malignancy of the lymphatic system often presenting as lymphadenopathy with potential multiorgan involvement. Sarcoidosis is a systemic granulomatous disease of unknown etiology that often presents heterogeneously with an unpredictable course. Consequently, sarcoidosis can mimic lymphoma clinically and radiographically.[1]

Case Description (CD)

This case involves a 40-year-old female with a history of heart failure with preserved ejection fraction, morbid obesity, prior pulmonary embolism, and pulmonary hypertension who presented to the emergency department (ED) with one week of abdominal pain, vomiting, and diarhea.

Figure 1 shows a Computed tomography (CT) scan of the abdomen that revealed hepatomegaly and multiple ill-defined hypodense lesions concerning for metastatic disease with pathological enlarged retroperitoneal lymph nodes increased since last year when she was lost to follow-up suggestive of lymphoma. She denied a family history of leukemia or lymphoma. Laboratory studies were negative for LDH, EBC, CMV, hepatitis, HIV, and AFP. Angiotensin converting enzyme was normal. Bone marrow biopsy was normocellular and retroperitoneal lymph node biopsy revealed non necrotizing granulomatous inflammation consistent with sarcoidosis reather than lymphoma.

She presented to the ED one month later progressive dyspnea, edema, and intermittent chest pain with clinical evidence of fluid overload.

CD Continued

There was concern for cardiac sarcoidosis contributing to acute on chronic diastolic heart failure presentation. BNP and troponins were within normal limits. She was started on IV diuresis and cardiac MRI showed nonspecific late gadolinium enhancement. Right heart catheterization showed low cardiac index and no evidence of fluid overload which further added concern for cardiac sarcoidosis which necessitated the follow up positron emission tomography (PET) scan.

Aggressive diuresis provided improvement in her weight and symptoms and she was discharged. PET scan showed no evidence of sarcoidosis or myocardial inflammation with hypermetabolic lymph nodes within the mediastinum and upper abdomen as well as innumerable foci of hypermetabolism within the liver and spleen presumed to reflect active sarcoidosis.

Clinical Images

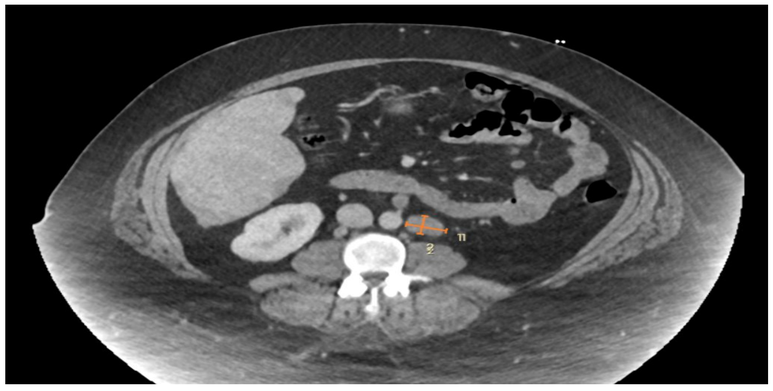


Figure 1: Lateral aortic retroperitoneal lymph node

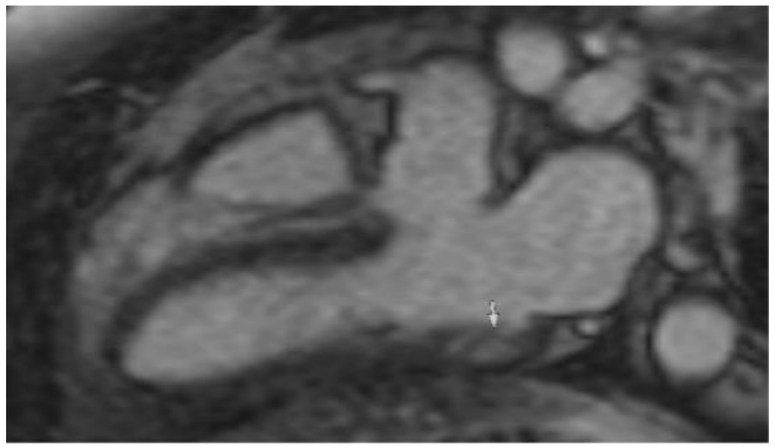


Figure 2: Mid wall late gadolinium enhancement along basal inferolateral segment

Discussion

This case demonstrates a unique diagnostic challenge of a patient with systemic sarcoidosis presenting with diffuse lymphadenopathy and visceral lesions that were suspicious for metastatic lymphoma based on initial CT imaging.

It underscores the limitations of radiographic modalities in distinguishing sarcoidosis from lymphoma and highlights the importance of tissue biopsy for definitive diagnosis.[2] Sarcoidosis should remain on the differential diagnosis for patients presenting with suspected lymphoproliferative disorders as it can mimic metastatic lymphoma.

References

1. Jammal TE, Pavic M, Valentin MG, et al. Sarcoidosis and cancer: a complex relationship. *Frontiers in Medicine, Rheumatology*. 2020; 7.
2. Jameson A, Revels J, Wang LL, et al. Sarcoidosis, the master mimicker. *Current Problems in Diagnostic Radiology*. 2022; 51 (1): 60-72.