

Case Report

Rare Cause Fororbital Mass in an African American

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Abstract

While sarcoidosis is a disease process that classically affects the lung parenchyma, presentation of sarcoidosis can be extrapulmonary in up to 30% of the cases. Essentially any organ can be involved in sarcoidosis; however, specific patient populations and risk factors are associated with varying degree of extrapulmonary sarcoidosis. In particular, orbital sarcoidosis has been found to be more common in women who are at least 50 years old although it still rare compared to other forms of ophthalmic involvement such as uveitis (approximately 25-60% of patients with systemic sarcoidosis). Furthermore, orbital involvement as a presentation of sarcoidosis has very few reported cases with conflicting statistics on incidence. We present a case of an African American female pain and pressure surrounding left eye gradually worsening over a month, who was subsequently diagnosed with orbital sarcoidosis.

INTRODUCTION

While sarcoidosis is a disease process that classically affects the lung parenchyma, the presentation of sarcoidosis can be extrapulmonary in up to 30% of the cases [1]. Essentially any organ can be involved in sarcoidosis; however, specific patient populations and risk factors are associated with extrapulmonary sarcoidosis involvement. In particular, orbital sarcoidosis has been found to be more common in women who are at least 50 years old although it is rarer than other common sites of ophthalmic involvement such as uveitis (approximately 25-60% of patients with systemic sarcoidosis) [1]. Furthermore, orbital involvement as a presentation of sarcoidosis has had few reported cases with conflicting statistics on incidence [1-3].

CASE PRESENTATION

History of presenting illness

A 59-year-old African American female was referred to oculoplastic surgery from her optometrist for post traumatic pain and pressure surrounding her left eye lasting over a month with gradual increase in symptoms. She also described increased proptosis, unilateral lacrimation and a burning sensation upon downward gaze. Prescription ophthalmic NSAID drops provided minimal relief of symptoms. Upon review of systems, pertinent positives included dizziness and a sense of balance issues (Figure 1-3).

Past medical history

Significant for cataract extraction.

Physical exam: Significant for left sided proptosis, hyperglobus, lagophthalmos and a palpable mass inferotemporally and superonasally.

Imaging: CT scan of the orbits revealed diffuse inflammatory process surrounding the left orbit with pre-septal and post-septal involvement. Subsequently CT scan of the thorax was performed which revealed an 8 mm left, upper lobe pulmonary nodule and enlarged middle mediastinal lymph nodes.

Pathology: An orbitotomy without bone flap procedure allowed for biopsy of the periorbital tissues with pathology results of a non-necrotizing granuloma with mild non-clonal lymphoplasmacytic infiltrate. Findings were consistent with extra-pulmonary sarcoidosis.

Medical Intervention: Patient was referred to pulmonology for biopsy of pulmonary nodule to assess for pulmonary sarcoidosis. Currently, the patient is being treated with oral prednisone.

DISCUSSION

This case provides evidence for maintaining a broad, yet critical differential diagnosis in patients with orbital inflammation.

Sarcoidosis can present in a variety of locations, mimicking many other disease processes, it should be considered in the differential, particularly in relevant patient population, particularly in African American populations, and within endemic areas, such as the CSRA [4]. The treatment plan is dependent upon the presence or absence of systemic disease. Systemic



Figure 1 Axial post contrast CT of the orbits demonstrates pronounced left-sided proptosis. There is also marked thickening and enhancement of the preseptal and postseptal soft tissues on the left relative to the normal right orbit.



Figure 3 Axial post contrast CT of the orbits demonstrates significant interval reduction in the inflammatory changes surrounding the left globe and significantly improved left-sided proptosis. There is residual inflammatory stranding within the intraconal and extraconal spaces and persistent asymmetric thickening of the sclera on the left.

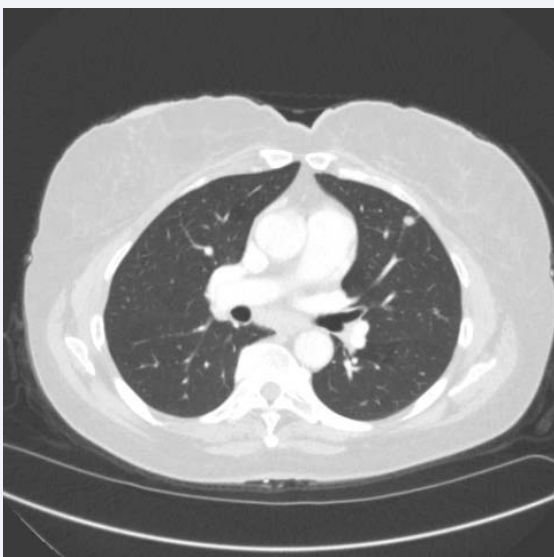


Figure 2 Axial non-contrast CT of the depicts an 8 mm left upper lobe pulmonary nodule. Lungs are otherwise well expanded with no other suspicious pulmonary nodules, masses, or pleural fluid collections.

steroid administration is the preferred method as it concurrently treats any other organ involvement of sarcoidosis. In the absence of systemic disease, intralesional injection of steroids has been shown to be effective as well. Surgical excision has not been shown to be an effective method due to the recurrence of disease and the risk of structural damage to the orbit [5]. Preliminary differential diagnosis for this case included lymphoma versus metastatic lesions.

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