

Case Report

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A Case of a Disseminated Coccidioidomycosis Presenting as Supraclavicular Mass

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Background

Coccidioidomycosis, also known as Valley fever, is an infection caused by exposure to dimorphic soil-dwelling fungi of the genus *Coccidioides*. Inhalation of the arthroconidia from either fungi *C. immitis* or *C. posadasii* causes lung infections. Lung pathology is by far the most common presentation of coccidioidomycosis, representing over 95% percent of all cases. Disseminated coccidioidomycosis, a rare complication, presents as meningitis, osteomyelitis, or cutaneous lesions, results from the hematogenous spread of the organism. Though coccidioidomycosis dissemination is well known, it is rarely considered in the differential of a supraclavicular mass, where the diagnosis is malignancy until proven otherwise. Here we report a case of disseminated coccidioidomycosis in an immune-competent individual presenting as supraclavicular mass.

Case presentation

A 25-year-old African-American male without prior medical history presented to our emergency department with a “mass on my neck.” He denied fever, chills, cough, trauma to the neck region however endorsed intermittent cough and fatigue. Over four months before admission since the initial presentation at the acute care clinic, the patient endorses thirty pounds of unintentional weight loss. He has a pet dog at home. He does smoke marijuana. He is born in California, but he has lived in Oklahoma for three years five years ago before returning to California.

At presentation to our facility and throughout his admission, the patient was hemodynamically stable, afebrile, in no acute distress, and breathing comfortably on room air. The patient had large left painful supraclavicular lymphadenopathy in both anterior and posterior triangles, but mostly in the posterior triangle without underlying erythema or necrosis. The skin lesions were tender erythematous, well-demarcated dry, scaly plaques located on the bridge of his nose (image d), below the left nasolabial fold above the left lateral commissure of the lips (image e), and several similar lesions across his chest and abdomen (image c). His right ankle was tender to dorsiflexion and plantarflexion without erythema or swelling. There was tenderness of the lower leg as well to palpation and tenderness of the right lateral dorsal foot as well. ACT chest and neck without contrast was performed which showed lesions in the neck (image a), lung (image b), and liver (not shown) with concerns for malignancy. The supraclavicular lesion was described as a large ill-defined hypo-attenuating lesion left supraclavicular

mass. HIV testing and ANA were negative. CMP and CBC were unremarkable.

The patient underwent ultrasound-guided biopsy of left supraclavicular mass, which resulted in coccidioidomycosis and was negative for malignancy. An azole antifungal (fluconazole) was started and the patient was discharged with follow up with an infectious disease specialist. Fungal culture grew *Coccidioides immitis*. After further questioning the patient admitted the four months prior, he was treated for pneumonia at an acute care clinic four months prior to admission. During the time, he was working as a construction worker, intermittently using personal protective equipment. At the time, he presented with shortness of breath, vomiting, non-productive cough, and nausea. He was treated with oral azithromycin, and his symptoms improved over a month and a half. He still endorsed an intermittent non-productive cough. Though improved, he noticed a growth on the left side of his neck as well as several skin sores on his left nose, left upper lip, left shoulder, and anterior abdomen. Due to the increasing size of the skin lesion and neck mass, he decided to return to the acute care where they directed him to the emergency room [1-3].

Discussion

Extra-pulmonary coccidioidomycosis in an immunocompetent individual is extremely rare (< 1%). Here is a case of a supraclavicular mass in a previously healthy individual due to disseminated coccidioidomycosis. This case highlights the importance of maintaining a broad differential for supraclavicular masses which are highly associated with malignancy. The patient became symptomatic after inhalation of arthroconidia leads to a primary infection that is asymptomatic, subclinical in most patients. In this case, the patient likely was inoculated with the fungus during his occupation as a construction worker, where was inconsistent with his personal protective equipment. The patient was also an African-American male. The disease is more frequent (in order of decreasing prevalence) in Filipinos, African-Americans, Native-Americans, Hispanics, and Asians. In addition, males are more susceptible than females. The patient’s history was consistent with coccidioidomycosis. Months prior to diagnosis, he had a flu-like illness, and at presentation, the patient had cutaneous lesions and ankle arthralgia. The patient, unfortunately, was told he likely had cancer, luckily, the biopsy confirmed the diagnosis. This case again illustrates the importance of keeping a broad differential in a new presentation of supraclavicular mass.

References

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