



Disseminated Coccidioidomycosis presenting as Severe Sepsis

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INTRODUCTION

- Coccidioidomycosis is a fungal infection endemic to southwestern United States with rising incidence. Most are usually asymptomatic or has mild respiratory symptoms.
- Disseminated cocci is the most severe and occurred in about 1% of all cases.
- Presentation as severe sepsis or septic shock is even more rare and has poorer outcome.
- This case vignette brings awareness to atypical presentations of disseminated cocci.

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CASE DESCRIPTION

A 52 year old male with no medical history presented with worsening dry cough, meeting SIRS criteria including leukocytosis of 28K. Imaging demonstrated diffuse bilateral pneumonia with a mass near distal esophagus measuring 6.5 x 3.9 with biopsy negative for malignancy. His exam was notable for cutaneous skin nodules in multiple areas. He was empirically treated for community acquired pneumonia, but was found to have disseminated cocci with titer of 1:32. Left arm lesion biopsy and bronchoscopy culture were positive for cocci, LP positive for cocci IgG but negative for meningitis. Initial treatment was started with Diflucan 800mg QD and was escalated to amphotericin due to worsening clinical status. He was eventually discharged with oral Diflucan. Patient returned about two months later for worsening weakness, with associated hyponatremia and hypotension, found to have adrenal insufficiency with positive ACTH stimulation test, thought possibly due to disseminated cocci. He was started on hydrocortisone with symptoms improvement. He was subsequent discharge with close outpatient follow-up.

FIGURE 1



DISCUSSION

- Treatment are often initiated in those with significant symptoms or extensive pulmonary involvement or high risk factors (such as diabetes, frailty). First line is typically azole. Amphotericin B is considered as initial treatment in those with severe osseous disease, and is recommended in pregnant female during first trimester due to potential teratogenic effect.
- In addition to antifungals, surgical intervention is indicated for patients with spinal instability, spinal cord or nerve root compression, or significant sequestered paraspinal abscess and therefore require a neurosurgical consultation. It is unclear why this patient was not deemed an operative candidate despite meeting the above criteria.
- Coccidioidomycosis should be considered as a cause of community acquired pneumonia in endemic areas of California, Arizona, and New Mexico.
- Although disseminated cocci is rare and likely under-reported, clinicians should keep disseminated fungal infection as part of work-up with severe sepsis or septic shock. Adrenal insufficiency may be a sequela of disseminated fungal disease and is known cause of hyponatremia and hypotension.