



COVID-19 and Relapse of Coccidioidomycosis

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HISTORY

Chief Complaint: fever, chills and night sweats

HPI

25-year-old Hispanic male here for new onset of fever, chills and night sweats with decreased appetite and weight loss.

Patient history is significant for diagnosis of acute pulmonary coccidioidomycosis in fall of 2018 diagnosed at outside facility. At that time he was treated with fluconazole 400 mg daily, stopped in March of 2019 and following this gradually resumed his usual daily activities without sequelae of past infection.

Patient reports developed COVID in November of 2020 and although his initial symptoms of COVID19 resolved over 2-3 weeks he thereafter developed a “second” course of fever, chills and night sweats with scant cough and anorexia. No syncope, no pleuritic pain or hemoptysis. No headache or joint pain or skin lesions.

PAST MEDICAL HISTORY:

He denies all.

PAST SURGICAL HISTORY:

He had ear surgery for a ruptured eardrum in 2014.

FAMILY HISTORY:

Arthritis and diabetes.

SOCIAL HISTORY:

Previous heavy tobacco use.

ALLERGIES:

No known drug allergies.

REVIEW OF SYMPTOMS:

As per HPI

MEDICATIONS

None

PHYSICAL EXAMINATION:

Vital Signs: Temperature 36.3 C, blood pressure 130/80 mmHg, heart rate 78 bpm, respirations 18 breaths/minute, saturating 99% on room air, height 5 feet 11 inches, weight 169 pounds.

General: Hispanic male in no acute distress.

HEENT: Atraumatic, normocephalic. Pupils are equal and round bilaterally without injection or icterus.

Neck: Supple without thyromegaly.

Lymph: No cervical or supraclavicular lymphadenopathy.

Cardiovascular: Regular rhythm and rate without murmurs, rubs or gallops.

Lungs: Clear to auscultation bilaterally without increased work of breathing noted.

Abdomen: Soft, nontender. No hepatosplenomegaly.

Extremities: Without clubbing, cyanosis or edema.

Musculoskeletal: Without pain on palpation of large muscle or joint groups.

Neurologic: No gross motor or sensory deficits.

Psychiatric: He has normal affect and asks appropriate questions with good insight into his condition. No tangential speech or thought patterns observed.

ADMISSION LABS:

CHEMISTRY/METABOLIC PANEL

Laboratory values were reviewed today with the patient. His past Coccidioides complement fixation titers were reviewed and from Oct 2019 were at nadir of 1:2. Max Cocci CF titer from 2018 was 1:8.

Labs from January 2021 show a normal CBC with mild eosinophilia. AST is mildly elevated at 47 U/L, ALT normal at 30 U/L, alkaline phosphatase and total bilirubin are normal. His Coccidioides complement fixation titer is now 1:16. There are no inflammatory markers listed.

CT of chest shows ground glass opacities in left lower lobe abutting the pleural with numerous small nodules abutting this infiltrate.

What are probable/possible diagnoses?

- Community Acquired Pneumonia
- Relapsing of coccidioidomycosis
- Atypical pneumonia – Mycoplasma, Q fever etc
- Pneumocystis Pneumonia

WHAT DID YOU FIND MOST CHALLENGING ABOUT THIS CASE?

Progression of latent infections following COVID19 has been reported in tuberculosis and an association between COVID19 and other invasive fungal infections has been recently noted (aspergillosis and mucormycosis). This phenomenon had not previously been recognized with coccidioidomycosis or other endemic mycosis. The potential for relapse is of significant concern given the large number of patients with endemic mycoses diagnosed yearly, and these organisms may lie latent for years after initial acquisition.

WHAT DO YOU SEE AS THE BIGGEST UNMET EDUCATIONAL NEED IN MANAGING COVID-19-ASSOCIATED INVASIVE FUNGAL INFECTIONS?

Relapsing disease with endemic mycoses following COVID19 places a large number of patients at risk. The endemic mycoses generally provide immunity to subsequent infection following resolution and relapse is uncommon (<5%). Defining the at risk period is essential to advise patients and physicians on the duration of follow-up following an endemic fungal infection.