David B. Villafuerte*, DO

Disseminated peritoneal coccidioidomycosis

<https://doi.org/10.1515/jom-2021-0193>

Received July 27, 2021; accepted September 13, 2021;

published online October 8, 2021

A 37-year-old Hispanic man visiting from Northern Mexico was admitted due to intermittent, moderate, non-radiating, right upper quadrant abdominal pain for five days. On laboratory findings, complete blood count was only remarkable for eosinophils of 6.4 (reference range, 0.0–0.5). C-reactive protein, aspartate aminotransferase and alanine aminotransferase, bilirubin, alkaline phosphatase, and lipase were within normal limits. On physical examination, the patient was found to have a positive Murphy's sign. Ultrasound demonstrated a distended and thickened gallbladder with multiple gallstones, including one at the gallbladder neck which measured 2.4 cm. Based on history, physical examination, and ultrasonographic findings, surgical consultation suspected the patient to be suffering from acute symptomatic cholelithiasis. The patient was taken for laparoscopic cholecystectomy where adhesions (Image A), spherules (Image B), and free peritoneal fluid was discovered. Samples were obtained that revealed Gomori's methenamine silver and Periodic acid-Schiff positive, ruptured cocci spherules, and occasional endospores; acid-fast bacillus negative, vimentin positive, syndecan 1 (CD138) positive, antigen Ki-67 $\pm 15\%$; and cytokeratin CAM 5.2 positive mesothelial cells. A diagnosis of granulomatous inflammation consistent with *Coccidioides* infection was made. Infectious Disease was consulted and prophylactically started the patient on fluconazole treatment in case it could become symptomatic. Unfortunately, the patient did not follow up with primary care clinic as planned during discharge and attempts to contact him were fruitless. At this time, patient is considered lost to follow-up.

Coccidioidomycosis is contracted by inhaling the spores of the dimorphic fungi *Coccidioides immitis* or *Coccidioides posadasii* [1]. These fungi are found in the soil, most typically in endemic regions of Southwestern United States, Northern Mexico, and Central America [1]. Fewer than 50 cases of peritoneal *Coccidioides* infection have

(A) Adhesions and (B) spherules were discovered during laparoscopic cholecystectomy.

been reported worldwide, even though it is suspected to be more common [2–4]. In reported cases of symptomatic peritoneal involvement, patients present similarly to non-peritoneal symptomatic cases with low-grade fevers, cough, joint pain, headaches, and abdominal pain. However, it is suspected that over half of individuals with Coccidioidomycosis do not seek medical attention due to a subclinical presentation [5]. Similar to mild cases, it is believed that subclinical disease is self-limited [6]. A link between Coccidioidomycosis and cholelithiasis is not known or suspected. Therefore, if this patient had not been suffering from comorbid cholelithiasis, the patient's infection may have never been uncovered.

Research funding: None reported.

Author contributions: The author has responsibility for the entire content of this manuscript and approved its submission.

Competing interests: None reported.

*Corresponding author: David B. Villafuerte, DO, Laredo Medical Center, Internal Medicine, 1700 E. Saunders Street, Laredo, TX 78041, USA, E-mail: dbvillafuerte@gmail.com

References

1. Brown J, Benedict K, Park BJ, Thompson GR 3rd. Coccidioidomycosis: epidemiology. *Clin Epidemiol* 2013;5:185–97.
2. Phillips P, Ford B. Peritoneal coccidioidomycosis: case report and review. *Clin Infect Dis* 2000;30:971–6.
3. Crum-Cianflone NF, Truett AA, Teneza-Mora N, Maves RC, Chun HM, Bavaro MF, et al. Unusual presentations of coccidioidomycosis: a case series and review of the literature. *Medicine* 2006;85:263–77.
4. Storage TR, Segal J, Brown J. Peritoneal coccidioidomycosis: a rare case report and review of the literature. *J Gastrointest Liver Dis* 2015;24:527–30.
5. Crum NF, Lederman ER, Stafford CM, Parrish JS, Wallace MR. Coccidioidomycosis: a descriptive survey of a reemerging disease. Clinical characteristics and current controversies. *Medicine (Baltimore)*. 2004;83:149–75.
6. Hernandez H, Erives VH, Martinez LR. Coccidioidomycosis: epidemiology, fungal pathogenesis, and therapeutic development. *Curr Trop Med Rep* 2019;6:132–44.