Case Report

iMedPub Journals
www.imedpub.com

Gynaecology & Obstetrics Case report
ISSN 2471-8165

2020
Vol.6 No.4:23

DOI: 10.36648/2471-8165.6.3.103

A Rare Case of Coccidiomycosis Tubo-Ovarian Abscess

Yang S* and Sit A

Department of Obstetrics and Gynecology, Santa Clara Valley Medical Center, San Jose, USA

***Corresponding author:** Yang S

sophia.yang@hhs.sccgov.org

Department of Obstetrics and Gynecology, Santa Clara Valley Medical Center, 751 S Bascom Ave, San Jose, CA 95128, USA.

Tel: +6267368585

Citation: Yang S, Sit A (2020) A Rare Case of Coccidiomycosis Tubo-Ovarian Abscess. Gynecol Obstet Case Rep Vol.6 No.4:23

Abstract

Background: Coccidioidomycosis is caused by a fungus endemic to the soil in the southwestern United States, Mexico, Central, and South America. While many exposed people never have symptoms, about 1% of patients can develop systemic, disseminated infection, most commonly in the lungs.

Case presentation: We describe an unusual case of tubo-ovarian abscesses secondary to disseminated coccidioidomycosis.

Conclusion: While unusual, coccidioidomycosis should be considered in the differential diagnosis of tubo-ovarian abscesses not responding to antibiotics. The diagnosis of coccidiomycosis as an infectious etiology of a tubo-ovarian abscess will allow the tailoring of the appropriate medical treatment, and potentially avoiding unnecessary surgery.

Teaching points: Consider coccidioidomycosis as a rare but possible source of persistent tubo-ovarian abscess in a patient unresponsive to antibiotics.

Keywords: Coccidioidomycosis; Tubo-ovarian abscesses; Medical treatment

Received: July 18, 2020; **Accepted:** August 13, 2020; **Published:** August 20, 2020

Introduction

Coccidioidomycosis, also known as valley fever, is an infection caused by a fungus that is endemic to the soil in the southwestern United States, Mexico, Central, and South America. Transmission is usually via inhalation of fungal spores [1]. In 2017, 14,364 cases of Valley fever were reported to CDC, though this is thought to be an under-estimate [1]. While many exposed people never have symptoms and never require treatment, about 1% of patients can develop systemic, disseminated infection. The most common presentation of coccidioidomycosis is pulmonary, while the most common areas of extrapulmonary involvement are skin, skeletal, and meninges. Disseminated disease is more common in immune-suppressed patients. Treatment typically includes an azole such as ketoconazole, fluconazole, and itraconazole or amphotericin B [2]. There are rare cases of pelvic coccidioidomycosis described in the literature. A 1986 review notes 11 described cases with involvement of the female genital tract. The authors note that usual manifestations are granulomatous endometritis or granulomatous tubo-ovarian disease with peritonitis. In the described cases, the diagnosis was unexpected and found by biopsy or culture [3]. A subsequent report from 1999 reports involvement of the female genital tract as well as pulmonary, adrenal, intestinal, and central nervous system involvement [4]. Notably, a surprising case of genital tract involvement was diagnosed in an otherwise healthy Danish woman residing in Denmark [5].

Case Report

We discuss an unusual presentation of tubo-ovarian abscesses in a 32 year old nulligravid woman with past medical history notable for type 2 diabetes with a hemoglobin A1C 8.4%, history of coccidioidomycosis with previous bilateral osteomyelitis requiring debridement, methamphetamine abuse disorder, late latent syphilis, unstable housing, who presented to a community hospital with 5 days of vague abdominal pain, found to have classic positive cervical motion tenderness, right adnexal tenderness, and vaginal discharge. She was found to be positive for chlamydia and gonorrhea and treated appropriately. She received a diagnosis of pelvic inflammatory disease and was also found to have bilateral tubo-ovarian abscesses on CT abdomen and pelvis measuring up to 7.4 × 4.0 × 7.2 in size (**Figure 1**). She received intravenous cefotetan and doxycycline and was subsequently discharged on a 10 day course of outpatient metronidazole and doxycycline. However, due to insurance issues she was unable to obtain her antibiotics. She was readmitted to the hospital after

having persistent fevers, nausea, and chills. She was started on intravenous cefotetan, doxycycline, metronidazole and underwent several interventional radiology drainage procedures of tubo-ovarian abscesses. Antibiotics were discontinued as all cultures were negative but restarted when her fever recurred. Due to her lack of clinical response to intravenous antibiotics and several ultrasound–guided drainages, she was recommended for possible surgical washout. As a result, she was transferred to a tertiary level hospital for possible surgical management.

Upon arrival she was started on cefoxitin and doxycycline. Ultrasound was performed, showing complex cystic masses bilaterally, with the left measuring 10.9 × 6.0 × 5.8 cm (**Figure 2**). She had minimal symptoms. However, on hospital day 3 she became septic with fever, tachycardia, hypotension, elevated lactate despite otherwise having no pain. Her antibiotics were changed to ampicillin, gentamicin, and clindamycin. On day 4 she had repeat CT of the abdominal and pelvis showing enlarging pelvic fluid/abscess collections and mild obstruction of the left renal system. She underwent second interventional radiology drainage.

Given her known history of disseminated coccidioidomycosis, nonadherence to recommended life-long azole medication since 2015 and the lack of response to antibiotics despite multiple ultrasound-guided drainage procedures, the treating team started to entertain the possibility of disseminated coccidioidomycosis as the etiology of the tubo-ovarian abscesses. Shortly thereafter, though she had negative blood and wound aerobic and anaerobic cultures on day of transfer, it was found that her previously reportedly negative cultures drawn at the community hospital were growing mold on the petri dish. Though contamination certainly was considered, this added to the concern that she may have had disseminated coccidioidomycosis in her adnexa.

Given her clinical picture and in consultation with infectious disease specialists, her antibiotics were changed to piperacillin/tazobactam and she was empirically started on amphotericin on day 5 for the presumed diagnosis of disseminated coccidioidomycosis. She had previously already been restarted on oral itraconazole. Several days later, culture of fluid from interventional radiology drainage eventually grew coccidioidomycosis immitis and coccidioidomycosis posadasii that was found susceptible to fluconazole, itraconazole, and posaconazole, thus confirming diagnosis. Complement fixation titers were checked and she was found to have titers of 1:65.

A multidisciplinary care team discussed treatment options including surgical extirpation versus medical management. As she was clinically improving with anti-fungal treatment, decision was made to continue with intravenous amphotericin unless there was acute decompensation. She received two weeks of IV itraconazole and was also recommended to continue itraconazole indefinitely. She had no further fevers or vital sign instability and her white count normalized. Clinically, her abdominal pain resolved and she felt well. She was eventually discharged. She had several clinic follow-ups with the gynecology team over the course of many months where she had no clinical symptoms. Imaging was repeated six months after discharge which showed a decreased collection in the left adnexa measuring 2.3 × 2.5 × 2.3 cm (**Figure 3**).

Given her previous history of bone involvement as well as this episode, she was recommended to continue lifelong azole indefinitely. Her complement fixation titers peaked at 1:256 and most recently were 1:32. At her 12 month follow-up visit, she remained adherent to azole therapy and was asymptomatic for any remnant of pelvic disease.

Discussion

This case describes an unusual case of immunocompetent disseminated coccidioidomycosis as the infectious etiology of a tubo-ovarian pelvic abscess. It adds to the literature describing this rare manifestation. Learning points for this case are to

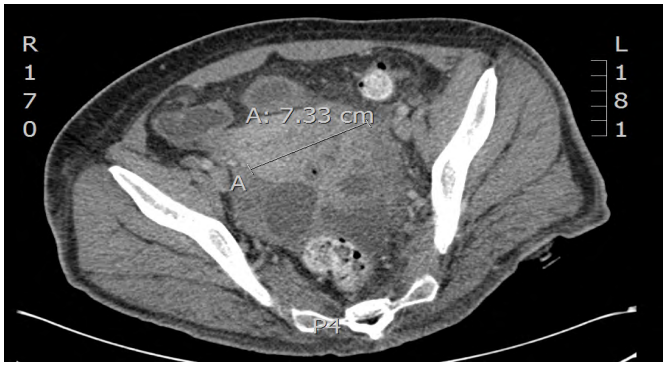

Figure 1 CT Abdomen and Pelvis.

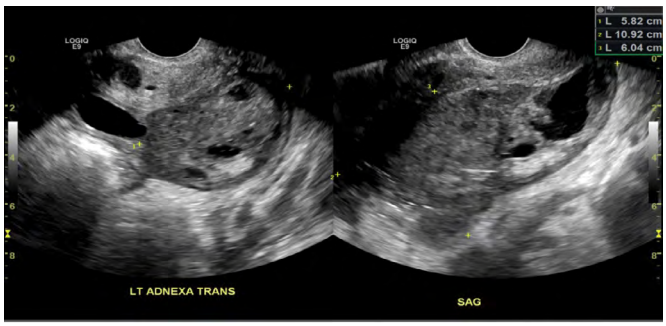

Figure 2 Pelvic Ultrasound.

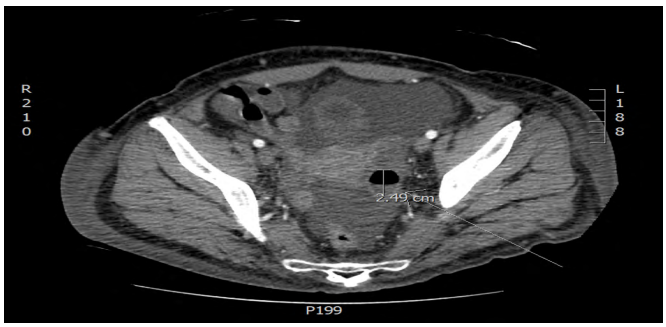

Figure 3 Follow-up CT Abdomen and Pelvis.

consider coccidioidomycosis as a rare but possible source of persistent tubo-ovarian abscess unresponsive to antibiotics even in relatively immunocompetent patients.

The recognition of disseminated coccidioidomycosis as part of the differential diagnosis of pelvic abscess had significant impact on clinical management. However, this can be challenging as confirmation of diagnosis can take days to weeks while waiting for culture results or antibody titer testing, which poses challenges to the confirmation of the diagnosis. In the management of pelvic abscess unresponsive to standard intravenous antibiotic regimen, the additional time waiting for confirmation of coccidioidomycosis poses additional management challenge, as the typical alternative is surgical management. There were several notable aspects of this patient's history that raised the treating team's suspicion for this otherwise rare etiology of pelvic coccidioidomycosis, but cases have been described in patients without obvious signs [5].

Conclusion

The diagnosis of rare disseminated coccidiodomycosis changed the course of medical treatment by adding the appropriate anti-fungal medications and avoiding the need for surgical treatment.

Financial Disclosure

There is no financial support for this manuscript and this manuscript was prepared entirely by the authors.

Conflict of Interests

The authors declare no conflicts of interest.

References

1 Centers of Disease Control. Valley Fever (Coccidioidomycosis) (2019) https://www.cdc.gov/fungal/diseases/coccidioidomycosis/index.html.

2 Galgiani JN, Ampel NM, Blair JE, Catanzaro A, Geertsma F, et al. (2016) Infectious Diseases Society of America (IDSA) clinical practice guideline for the treatment of coccidioidomycosis. Clin Infec Dis. 63(6): e112-e146.

3 Bylund DJ, Nanfro JJ, Marsh JW (1986) Coccidioidomycosis of the female genital tract. Archives of Pathology & Laboratory Medicine. 110(3): 232-235.

4 Chowfin A, Tight R (1999) Female genital coccidioidomycosis (FGC), Addison's disease and sigmoid loop abscess due to Coccidioides immites; case report and review of literature on FGC. Mycopathologia. 145(3): 121-126.

5 Baek O, Astvad K, Serizawa R, Wheat LJ, Brenoe PT, et al. (2017) Peritoneal and genital coccidioidomycosis in an otherwise healthy Danish female: A case report. BMC infectious diseases. 17(1): 105.