JACOBS PUBLISHERS

OPEN ACCESS

Jacobs Journal of Gynecology and Obstetrics

Case Report

Cryptosporidium in Pregnancy; an Exploration of Risk

Margaret Krueger[1*]

[1]*University of South Alabama, Children's and Women's Hospital*

**Corresponding author: Dr. Margaret Krueger, 3 Mohawk St. Mobile AL 36606, University of South Alabama, Children's and Women's Hospital, USA, Tel: (512) 917-5588; Email: mkrueger@health.southalabama.edu*

Received: 06/04/2015

Accepted: 06/30/2015

Published: 06/30/2015

Abstract

Background: *Cryptosporidium* is a microscopic parasite that causes the diarrheal disease cryptosporidiosis. Patients become infected with cryptosporidium after accidentally swallowing the parasite, which is found in soil, food, water, or surfaces that have been contaminated with the feces from infected humans or animals. There are many species of *Cryptosporidium* that infect humans and animals. The parasite is protected by an outer shell that allows it to survive outside the body for long periods of time and makes it very tolerant to chlorine disinfection. While this parasite can be spread in several different ways, water (drinking water and recreational water) is the most common method of transmission. It is one of the most frequent causes of waterborne disease among humans in the United States. Despite its prevalence, few cases have been reported of *Cryptosporidium* in pregnancy.

Objective: It is known some maternal infections can cross placenta and deleteriously affect the fetus. We present a case of a patient with confirmed cryptosporidiosis in the late 1st trimester.

Case

The patient of study is a 28-year-old African-American female, gravida 3 para 2, with past medical history including chronic hypertension and anxiety. She initially presented to the emergency room at 14 weeks gestation with 9-day complaint of gastrointestinal symptoms which had progressed to severe vomiting and diarrhea over the past 3 days. She reported one of her children had similar illness, and his stool culture had been positive for shigella. He was improving with outpatient Bactrim therapy. Stool sample for culture and ova and parasites was obtained and the patient was given intravenous fluid hydration as well as antiemetics. Her serum potassium was found to be low at 2.8, and she was given potassium repletion. In the emergency room, she was able to tolerate some liquid intake and reported feeling improved. She was discharged home for outpatient follow-up the next day. The next day, she was evaluated in the office at her routine obstetric visit and found to have recurrence of vomiting and diarrhea that morning, and concern was enough to admit her to the inpatient antepartum service for continued supportive care and infectious disease consultation. Upon admission, her white blood cell count was 10.0 and complete metabolic panel was normal except for serum potassium of 3.0. Her initial treatment consisted of intravenous fluid hydration with potassium repletion while previously-obtained cultures were in progress. An infectious disease consultation was performed and the consulting physician recommended empiric intravenous Bactrim every

twelve hours, given she had a family member with Shigellosis. The risks and benefits of Bactrim use in pregnancy were discussed and patient declined empiric antibiotic treatment. On hospital day #2, O&P studies isolated cryptosporidium, and the infectious disease team recommended Nitazoxanide (Alinia), which is an oral antiparasitic used in the treatment for Cryptosporidium and Giardia. Nitazoxanide is pregnancy category B. Surprisingly, the stool culture failed to show growth of Shigella. The patient was discharged on hospital day #3 on Nitazoxanide to complete the recommended 3-day course.

Because an infection with *Cryptosporidium* should always prompt an evaluation for immunodeficiency, HIV antigen was ordered and results were negative in this patient.

Currently, she is 32 weeks gestation and most recent ultrasound done at 30 weeks revealed no abnormalities, showed an AFI of 11cm and had the fetus growing appropriately at 33rd percentile for EGA.

Discussion

At the current time the CDC warns "it is not known if cryptosporidium passes to the developing baby". This makes management and counseling patients difficult. The most abundant data exists for cryptosporidium affecting livestock populations and decreasing yields in breeding. The human data is extremely limited, however, based on the literature reviewed and this presented case, it is likely that cryptosporidium effects are limited to the dehydration associated with the disease process and fetal risks are unlikely.