Clinical Case Reports International

Case Presentation
Published: 27 Feb, 2023

Brucellosis in Pregnancy: About Case Report

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Abstract

Brucellosis is a bacterial infection that can have significant impacts on pregnancy. Pregnant women infected with *Brucella* spp. are at risk of miscarriage, stillbirth, preterm labor, and postpartum endometritis. The transmission of the bacteria can occur through consumption of contaminated animal products, direct contact with infected animals, or inhalation of airborne bacteria. Clinical symptoms in pregnant women may be non-specific and can be mistaken for other common pregnancy complications. Diagnosis is based on serological tests and treatment involves a combination of antibiotics. Early recognition and management of brucellosis in pregnancy is crucial to reduce maternal and fetal morbidity and mortality.

Keywords: Brucellosis; Pregnancy; Congenital infection; Spontaneous abortion; Therapy

Introduction

Brucellosis is a bacterial infection caused by the bacteria *Brucella*, which can infect humans and animals. During pregnancy, the infection can lead to complications for both the mother and the fetus [1]. Symptoms in pregnant women may include fever, fatigue, muscle aches, and abdominal pain. If left untreated, brucellosis can cause miscarriage, preterm labor, and stillbirth [2]. Treatment for brucellosis in pregnancy usually involves antibiotics, but the choice of medication may depend on the trimester and the severity of the infection.

Case Presentation

A 29-year-old female, at 20 weeks of pregnancy, presented with a history of fever, fatigue, and muscle pain for the past 2 weeks. The patient reported no prior medical problems and was otherwise healthy. The patient was a farm worker and reported consuming raw dairy products. On examination, the patient was found to have a temperature of 38.5°C, tachycardia, and tenderness in the joints. No other significant findings were noted during the physical examination. A complete blood count revealed leukopenia, and the blood culture was positive for *Brucella* spp. Serological tests (Widal, Rose Bengal, and ELISA) were performed, and all were positive for Brucellosis. An ultrasound of the abdomen was done, which showed an enlarged spleen and a viable 20-week fetus. Based on the patient's symptoms, positive blood culture, and serological test results, a diagnosis of brucellosis was made. The patient was started on a combination of doxycycline and rifampin for 6 weeks. Antibiotics such as streptomycin, which can cross the placenta and harm the fetus, were avoided. The patient's fever subsided after the first week of treatment, and she showed significant improvement in her overall symptoms.

The patient completed the full course of antibiotics and had a repeat serological test after 2 months, which was negative. She delivered a healthy full-term infant with no evidence of infection.

Discussion

Brucellosis is a bacterial infection caused by the bacterium *Brucella*, which is primarily spread through the consumption of infected animal products, such as dairy products, meat, and milk. In some cases, brucellosis can also be transmitted from person to person, typically through close contact with bodily fluids or secretions of an infected individual. Pregnancy and brucellosis can have serious consequences, as the infection can lead to complications for both the mother and the fetus.

During pregnancy, a woman's immune system is compromised, which makes her more susceptible to infections. In cases of brucellosis, the bacterium can cross the placenta and infect the fetus, leading to potential harm to the developing baby. The most severe outcome of fetal infection is spontaneous abortion or stillbirth, which can occur in up to 50% of infected pregnancies [2]. The bacterium can also infect the amniotic fluid, leading to premature rupture of membranes and premature delivery. In some cases, the infection can cause congenital anomalies in the fetus, such as

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Received Date: *09 Feb 2023*
Accepted Date: *23 Feb 2023*
Published Date: *27 Feb 2023*

Citation:
Ragmoun H, Riadh M, Montacer H, Sarra H. Brucellosis in Pregnancy: About Case Report. Clin Case Rep Int. 2023; 7: 1493.

hydrocephalus, or brain and spinal cord abnormalities [3].

In addition to these fetal consequences, brucellosis can also have serious consequences for the mother. The infection can cause fever, fatigue, joint pain, and other symptoms that can significantly impact the mother's health and quality of life. In some cases, the bacterium can spread to other parts of the body, such as the central nervous system, liver, and spleen, leading to more serious complications [3].

Diagnosing brucellosis in pregnant women can be challenging, as the symptoms of the infection are often nonspecific and can resemble other conditions, such as flu-like symptoms. The standard diagnostic test for brucellosis is a blood test, which can detect the presence of antibodies against the bacterium [4]. However, this test may not be reliable in the early stages of the infection, and a definitive diagnosis may require additional testing, such as a culture of the bacterium from a bodily fluid sample [5].

Treatment for brucellosis during pregnancy typically involves the use of antibiotics, which can be effective in eliminating the infection and preventing further harm to the mother and fetus. The most commonly used antibiotics for brucellosis are tetracycline, streptomycin, and doxycycline, although the specific treatment regimen will depend on the individual case and the severity of the infection [6]. In some cases, treatment may need to be started before a definitive diagnosis is made, to minimize the risk of harm to the mother and fetus.

To prevent brucellosis in pregnancy, it is important for women to take steps to reduce their risk of exposure to the bacterium. This may include avoiding the consumption of raw dairy products, meat, or milk, and practicing good hygiene, such as washing hands regularly and avoiding close contact with infected individuals [7]. Women who are at high risk of exposure to brucellosis, such as those who work with livestock or who live in areas where the infection is common, may also consider receiving a vaccine to protect against the bacterium.

Conclusion

Pregnancy and brucellosis can have serious consequences for both the mother and the fetus. The infection can lead to spontaneous abortion, stillbirth, premature delivery, and congenital anomalies, and can also cause serious health problems for the mother. Early diagnosis and prompt treatment with antibiotics can help to minimize the risk of harm to the mother and fetus, and taking steps to reduce exposure to the bacterium can help to prevent the infection.

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