



Pregnancy with brucellosis – A rare case report

Malavalli Kempasiddaiah Girija and Maheshwari Marisiddaiah

Department of Obstetrics and Gynaecology, Bharatha Ratna Dr B.R. Ambedkar Medical College & Hospital, Bengaluru, Karnataka, India.

ARTICLE INFO

Article history:

Received: 18 May 2014;

Received in revised form:
25 June 2014;

Accepted: 19 July 2014;

Keywords

Abortion,
Brucellosis,
Doxycycline,
labour,
Preterm.

ABSTRACT

Brucellosis is rare during pregnancy and most common route of infection is unpasteurized milk and milk products consumption. Brucellosis is associated with higher incidence of pregnancy loss, especially early pregnancy during febrile episodes and also associated with vaginal bleeding. Therefore it is advisable to have awareness for brucellosis in pregnant women, both in rural and in urban areas. Public health department should be directed to spread the news about the route of infection, dangers of contact with infected animals, dangers of consumption of raw milk and milk products.

© 2014 Elixir All rights reserved

Introduction

Brucellosis is a major zoonotic disease. *Brucella* is a coccobacillus, gram negative, non sporing and non motile aerobic bacterium whose hosts are mostly animals.[1,2] After this infection the incidence of abortion, premature rupture of membranes and preterm delivery is more.[3] The cause for spontaneous abortion in human is because of absence of erythritol in the human placenta.[4] It is common in Mediterranean region, East Africa, Arabian Gulf region. It is endemic in Sudi Arabia.[5] The diagnosis of brucellosis was established by demonstrating a brucella titre of >1:320 in a standard tube agglutination test (STAT) and a titre of >1:160 in 2-Mercaptoethanol (2-ME) for patients with sign and symptoms compatible with brucellosis.

Case report:

A 25 year old with obstetric score of G2P1L1 with 14 weeks period of gestation came to our hospital with complaints of fever since 10 days associated with chills and sweating also. Fever was high grade, intermittent in nature. Fever is associated with chills and sweating. Not associated with bleeding pv or loss of weight or loss of appetite. She did not had any other symptoms. Her past history and family history were not significant. Obstetric history- Last child was one year old and it was term vaginal delivery.

General Physical Examination showed, temperature >101 F, pallor was present, no lymphadenopathy. All the blood investigation were normal. Patients was put on symptomatic treatment for fever in view of pregnancy. But her fever did not come down, so she was investigated further for fever. At that moment blood culture was taken and the report showed antibody titre positive for brucella with >1:320.

She was started with antimicrobial therapy with doxycycline 100 mg twice daily for 6 weeks with rifampin 900 mg/day. She was symptomatically better. Her ultrasound report about the pregnancy showed normal foetus of 20 weeks period of gestation after the treatment. Now she is in her 7th month of gestation.

Discussion:

Brucellosis is a world wide zoonosis and it is challenging due to the diverse clinical presentations and needs special laboratory for confirming the diagnosis. Maternal infection with brucella during pregnancy can lead to significant morbidities like abortion, intra uterine death and preterm labour.[6] It is a systemic infection that can involve many organs and tissues. Brucellosis may be asymptomatic. Symptoms are generally non specific. Except for fever and malaise which is seen in 80-95% of the patients. Symptoms may appear suddenly over 1-2 days or gradually over 7 days or more. Common symptoms like fever, malaise, sweating, myalgia, tiredness and arthralgia. Signs like patients looks ill, pallor, lymphadenopathy, splenomegaly, hepatomegaly and skin rash. Investigation like white cell count be normal, Anaemia will be present. Blood cultures are positive in 10-90%. Antibody testing is the most reliable method for diagnosing brucellosis. Tube agglutination method where if the titres of 1:160 or higher is diagnostic. For many years, the standard treatment for brucellosis has been the combination therapy with Streptomycin and Tetracycline or Doxycycline.[7] In 1986 World Health Organisation(WHO) recommended the use of 6 weeks course of doxycycline plus Rifampin. Several researchers reported a relapse rate between 14-17% for this regimen.[8,9&10] In brucellosis the aim of treatment is to control illness and to prevent both complications and relapses. Thus in order to prevent the resistance to rifampin, a good antituberculous drug can be used. Doxycycline-Rifampin-Aminoglycoside(triple drug regimen) has lowest relapse rate when given for more than 6 weeks.[11] Trimethoprim-Sulfamethoxazole(TMP-SMZ) is also effective in treating pregnant women, either as a single agent or in combination with Rifampin or Gentamycin.

Conclusion:

The main way of preventing brucellosis is by using hygiene and pasteurizing all the milk that is to be ingested by human. Experiments have shown that co-trimoxazole and Rifampin are both safe drugs to use in treating pregnant women with brucellosis.

Conflict of interest:

The authors declare that there are no conflict of interest

Source of funding:

None.

Acknowledgment:

Authors acknowledge the scholars whose articles are cited and included in references of this manuscript. The authors are also grateful to authors/editors/publishers of all those articles and journals from where the literature for this article has been reviewed and discussed.

References:

- [1] Xiang Z, Zheng W, He Y (2006) *Brucella* genome annotation with literature mining and Curation. BMC Bioinformatics 7: 347.
- [2].Alton G, Jones L, Angus R (1988) Techniques for the brucellosis laboratory. INRA, Paris.
- [3] Hackmon R, Bar-David J, Bashiri A, Mazor M. Beer Sheba Brucellosis in pregnancy, Harefuah, 1998 ;135(1-2):3-7, 88.
- [4] Poole PM, Whitehouse DB, Gilchrist MM (1972) A case of abortion consequent upon infection with *Brucella abortus* biotype 2. J Clin Pathol 25: 882-4.
- [5] Alsekait MA (1999) Seroepidemiological survey of brucellosis antibodies in Saudi Arabia. Annals of Saudi Medicine 19: 219 -22.

[6] Madkour MM (1989) Pregnancy and brucellosis. In Madkour MM ed. Brucellosis. London: B Utterworth 197 -204.

[7] Young EJ. An overview of human brucellosis. Clin Infect Dis 1995;21:283-9.

[8] Ariza J, Gudiol F, Pallares R, et al. Treatment of human brucellosis with doxycycline plus rifampin or doxycycline plus streptomycin. A randomized, double-blind study. Ann Intern Med 1992;117:25-30.

[9] Solera J, Espinosa A, Geijo P, et al. Treatment of human brucellosis with netilmicin and doxycycline. Clin Infect Dis 1996;2:441-5.

[10] Colmenero Castillo JD, Hernandez Marquez S, Reguera Iglesias J M, Cabrera Franquelo F, Rius Diaz F, Alonso A. Comparative trial of doxycycline plus streptomycin versus doxycycline plus rifampin for the therapy human brucellosis. Chemotherapy 1989;35:146-52.

[11] Skalsky K, Yahav D, Bishara J, et al; Treatment of human brucellosis: systematic review and meta-analysis of randomised controlled trials. BMJ. 2008 Mar 29;336(7646):701-4. Epub 2008 Mar 5.