

Brucellosis after Consuming Goat's Milk: Case Report

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Abstract: *Brucellosis is a bacterial zoonosis transmitted directly or indirectly to humans from infected animals. We report a case of 56 year old male with history of fever with myalgias and night sweats for more than 20 days. He was evaluated exhaustively for cause of fever but nothing significant was found. Keeping remote possibility of brucellosis, his blood sample was sent for brucella serology which was found positive. Patient was started on rifampicin and doxycycline and he responded immediately. Retrospectively history of consumption of raw goat milk was obtained.*

Keywords: Brucellosis, raw goat milk

1. Introduction

About half a million cases of human brucellosis occur around the world each year.[1] The principal causing organism worldwide is *Brucella melitensis*, a species of *Brucella* found in sheep and goats. It is the most pathogenic and invasive species followed by *B. suis*, *B. abortus*, and *B. canis*. *Brucella* is a nonmotile, non-encapsulated, facultative intracellular, Gram-negative coccobacillus. [2]

Human brucellosis is commonly found in countries with rural communities that live in close association with animals, and its prevalence in a region depends on factors such as methods of processing milk and milk products, food habits, socioeconomic status, hygiene, and climate. Endemic in countries in the Mediterranean basin, the Arabian Gulf, the Indian subcontinent and parts of Mexico and Central and South America, this zoonotic disease is predominantly transmitted to humans through ingestion of unpasteurized milk of infected animals and dairy products prepared from such milk. It can also be transmitted through direct contact with fluids and carcasses of infected animals, consumption of its undercooked meat, and through inhalation of airborne infectious particles. These organisms can survive for long periods in dust, dung, water, slurry, soil, aborted fetuses, meat, and dairy products. [3]

The clinical features of brucellosis are nonspecific and depend on the stage of the disease and the organs and systems involved. The most commonly reported symptoms are undulating fever, fatigue, malaise, chills, sweats, which may be characterized by a peculiar odour at night, insomnia, headaches, myalgia, arthralgia, anorexia, weight loss, and hepatosplenomegaly. [4].

Without the critical epidemiological clue of exposure to animals, consumption of unpasteurized dairy products, or travel to endemic countries, this disease can pose a great diagnostic challenge to the unaware clinician.

Case report: A 56 year old male patient was admitted at Civil Hospital Bhoranj, Distt.Hamirpur HP INDIA with complaints of fever for around 20 days. Fever was documented maximum upto 102°F.It was associated with

chills and night sweats. He had lost around 5kg of body weight. He was also having generalised body myalgias especially low back pain since the onset of fever. Appetite of patient was normal. He was having constipation on most days. He was already admitted twice at two different hospitals since onset of symptoms and given treatment in form of broad spectrum antibiotics with no results.

His vitals at time of admission in our hospital were normal. General physical examination and systemic examinations both were unremarkable. He was subjected to a battery of tests which didn't reveal any clue to diagnosis. His Hb was 14.2g/dl, TLC: 6700/cumm., platelets: 1.2 lacs/ml. Peripheral smears was normal. Organ function tests were normal too.CXR and USG abdomen were normal. Sputum for CBNAAT and montoux skin tests were normal too. Common tropical infections were ruled out especially enteric with help of antibody tests and blood cultures. Urine culture too didn't reveal any abnormality.

RBPT (Rose Bengal Plate Test) was sent keeping remote possibility of brucellosis on day 5 of admission which came out positive on next day; it was further confirmed by brucella serology being strongly positive. Patient was started on doxycycline and rifampicin combination on day 6 of admission and he responded within 24 hours, fever went on a downhill trend on next day itself and he became a febrile on third day of starting rifampicin and doxycycline.

Retrospectively history of consumption of raw goat milk was obtained which he took for almost 1 month for low platelet count.

2. Discussion

Brucellosis is the commonest bacterial zoonosis and causes more than 500 000 human infections per year worldwide .The disease has a widespread geographic distribution and is labelled as regionally emerging zoonotic disease. It also comes under the WHO list of neglected tropical zoonotic infection. [5]

Brucella has been reported from all over globe in adults and children as well. [6] In 2016 Raina S et al in 2016 reported a

case of neurobrucellosis at Dr RPGMC kangra [7]. This patient too consumed raw goat milk only.

Brucella has also caused community outbreaks in past. An outbreak of brucellosis occurred in Penang, an island on the west coast of Peninsular Malaysia from March 2011 to March 2012 which involved 79 patients.

In our part of the world consumption of raw goat milk is considered a very healthy practice with particular expectations of improvement of platelet count due to one or other reason. Despite being endemic due to close association with domestic animals and prevalence of harmful consumption of raw milk and other cultural practices, brucellosis is not being suspected and evaluated for routinely by doctors leading to diagnostic dilemma for doctors and morbidity for the patients.

3. Conclusion

We believe that there is strong need to spread awareness in community regarding harmful effects of consuming raw milk. Efforts from govt and health care authorities are required in this regard. There is also need to make practicing doctors in field be vigilant about this disease and suspect and evaluate as cause of non resolving fever.

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