

An unusual presentation of brucellosis: acute hepatitis

LETTER TO THE EDITOR

Brucellosis is a systemic infectious disease and it is still an important public health problem throughout the world, but especially in the Mediterranean region, including Turkey.¹ Skeletal, cardiovascular, genitourinary and hematological manifestations are well-known. Neurobrucellosis, peritonitis, pericarditis, pancytopenia and hepatitis are unusual manifestations of brucellosis.² Liver involvement is frequent in acute and chronic brucellosis. Usually an increase in transaminase values and a mild hepatosplenomegaly occur; sometimes an acute hepatitis develops, but is rarely the only clinical manifestation of the infection.³ We report a case where hepatitis was the only manifestation of acute brucellosis.

A 33-year-old female patient was admitted to our clinic with complaints of fever, chills, headache, nausea and dark urine. Her temperature was 38.4°C, pulse was 76/min, respiratory rate was 16/min and blood pressure was 110/80 mmHg. Physical examination revealed yellow sclera and a hepatosplenomegaly of 1 cm. The laboratory test results revealed a leukocyte count of $3.8 \times 10^9/L$, C-reactive protein (CRP) of 26 mg/L, and an erythrocyte sedimentation rate (ESR) of 17 mm/h. Serum alanine transferase (ALT) level was 372 U/L, serum aspartate transferase (AST) 303 U/L, serum alkaline phosphatase 454 U/L, serum γ -glutamyl transpeptidase 192 U/L and total bilirubin concentration was 3.2 mg/dL. The HBs-Ag, anti-HBc IgM, anti-HAV IgM, anti-HCV, anti-CMV IgM, anti-VCA IgM and Gruber Widal tests were negative. The patient had a positive history of fresh cheese ingestion, so a Wright agglutination test was also performed and the titer was found to be positive at 1/320. Abdominal

ultrasonography showed moderate hepatosplenomegaly, without any structural or morphological changes. With these findings, she was diagnosed as having acute hepatitis due to brucellosis. Blood cultures had been performed before the antibiotic therapy was started. Doxycycline 200 mg/d and streptomycin 1 g/d treatment were started. The fever subsided on the fourth day of the treatment and blood cultures isolated *Brucella* spp. on the sixth day of admission. On the second week of the treatment, serum ALT and AST levels had fallen to 72 U/L and 59 U/L, respectively. On follow-up, the hepatic enzymes had returned to normal, as had the total leukocyte count, CRP and ESR.

The clinical manifestation of brucellosis is very broad, ranging from asymptomatic infection to serious debilitating disease. Liver and spleen enlargement with mild non-specific elevation of liver enzyme levels can be detected in approximately 50% of all brucellosis patients.¹ On the other hand, all cases with elevated liver enzymes should not be evaluated as liver involvement. Hepatic involvement has been reported in the literature in around 2%-3%.⁴ While hepatitis is common, it is usually subclinical, and jaundice is rare.¹ Lulu *et al.*⁵ reported 40% hepatic involvement in their study, namely 1% clinical hepatitis and 38.5% anicteric hepatitis.

In our case, presentation of acute hepatitis with high levels of liver function tests was thought to be due to the high bacterial inoculum's size. However, this case shows that acute hepatitis may represent the first and the only manifestation of brucellosis. Brucellosis must be considered in the differential diagnosis of acute hepatitis, especially if there is a history of fresh milk product ingestion and life in an endemic region.

[Braz J Infect Dis 2010;14(6):641-642]©Elsevier Editora Ltda.

Authors

Mehmet Uluğ¹
Mustafa Kemal Celen²
Celal Ayaz²

¹MD - Özel Ümit Hospital,
Department of Infectious
Diseases and Clinic
Microbiology, Eskişehir,
Turkey.

²MD - Dicle University
Medical School,
Department of Infectious
Diseases and Clinic
Microbiology, Diyarbakir,
Turkey.

Submitted on: 06/24/2010
Approved on: 06/24/2010

Correspondence to:

Dr. Mehmet Uluğ
Özel Ümit Hastanesi,
Enfeksiyon Hastalıkları
ve Klinik Mikrobiyoloji
Kliniği
Batıkent Mah. Gerekli
Sok. No: 13, 26140
Eskişehir.
Phone: (0532) 4475756
Fax: 0222 3350970
E-mail: mehmetulug21@
yahoo.com

We declare no conflict of
interest.

REFERENCES:

1. Gur A, Geyik MF, Dikici B, Nas K, Cevik R, Sarac J *et al.* Complications of brucellosis in different age groups: a study of 283 cases in southeastern Anatolia of Turkey. *Yonsei Med J* 2003; 44: 33-44.
2. Celen MK, Ulug M, Ayaz C, Geyik MF, Hosoglu S. Brucellar epididymo-orchitis in southeastern part of Turkey: an 8 year experience. *Braz J Infect Dis* 2010; 14: 109-15.
3. Losurdo G, Timitilli A, Tasso L, Carli C, Ciuchini F, Adone R *et al.* Acute hepatitis due to brucella in a 2 year old child. *Arch Dis Child* 1994; 71: 387.
4. Buzgan T, Karahocagil MK, Irmak H, Baran AI, Karsen H, Evirgen O *et al.* Clinical manifestations and complications in 1028 cases of brucellosis: a retrospective evaluation and review of the literature. *Int J Infect Dis* 2010; 14: e469-78.
5. Lulu AR, Araj GF, Khateeb MI, Mustafa MY, Yusuf AR, Fenech FF. Human brucellosis in Kuwait: a prospective study of 400 cases. *Q J Med* 1988; 66: 39-54.