

CASE REPORT

A brucellosis case presenting with vesicular and maculopapular rash and febrile neutropenia

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ABSTRACT

Brucellosis is a systemic disease in which all kind of tissues and organs can be affected. Brucellosis may present with different symptoms and symptoms are non-specific. A broad spectrum of clinical manifestations can be seen, therefore diagnosis can be difficult. Cutaneous complications and febrile neutropenia have been rarely reported. Here, a rare brucellosis case was reported that he applied with fever, skin eruption and neutropenia. We emphasized that especially in endemic areas brucellosis should always be kept on mind in the differential diagnosis of patient with skin eruption and febril neutropenia. *J Microbiol Infect Dis 2014;4(1): 39-41*

Key words: Brucellosis, complications, rash, febril neutropenia.

Veziküler ve makülopapüler döküntü ve febril nötrojeni ile başvuran bir bruselloz olgusu

ÖZET

Bruselloz, tüm doku ve organları etkileyebilen sistemik bir hastalıktır. Bruselloz farklı belirtiler ile ortaya çıkabilir ve semptomlar özgül değildir. Klinik bulgular geniş bir yelpazede görülebilir, bu yüzden tanısı zor olabilir. Cilt komplikasyonları ve febril nötrojeni nadiren bildirilmiştir. Burada, nadir görülen, ateş, cilt erupsiyonu ve nötrojeni ile seyreden bir bruselloz hastası sunuldu. Özellikle endemik bölgelerde deri döküntüsü ve febril nötrojenili hastaların ayırıcı tanısında brusellozun her zaman akılda tutulması gerektiği vurgulandı.

Anahtar kelimeler: Brusella, komplikasyonlar, döküntü, febril nötrojeni

INTRODUCTION

Brucellosis is a systemic disease in which all kind of tissues and organs can be affected; especially, reticuloendothelial and musculoskeletal systems.^{1,3} This disease, despite of being encountered all over the world it is particularly widespread in the Mediterranean countries, the Arabian Peninsula, India, Central and South America.⁴ Brucellosis may present with different symptoms. Symptoms are non-specific and can include fever, night sweating, headache, backpain, myalgias, and fatigue. A broad spectrum of clinical manifestations can be seen.^{4,5} Therefore diagnosis can be difficult. However cutaneous complications and febrile neutropenia have been rarely reported.⁶⁻⁷ We report a patient with brucellosis in whom the main presenting clinical feature was febrile neutropenia and maculopapular rash.

CASE

A 61-year-old man was referred to our center (Muğla, University Hospital, Turkey) with complaints of fever, skin eruption, weakness, loss of appetite, weight loss during the previous 2 months and night sweating. His complaints began two months prior to the recent hospitalization with night sweating and weakness. The patient had presented with body and back skin complaints 7 days earlier to the dermatology policlinics and prescribed topical treatment for exogenous urticaria. Because of no improvement, the patient visited the dermatology ambulatory clinic once again. After the blood work-up showed WBC: 1960/mm³ with 43.3% of neutrophils (860/mm³), the patient was referred to the infectious diseases ambulatory clinic. Three days later the patient presented to the infectious diseases ambulatory clinic

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with leukopenia etiology and initial diagnosis of viral infection. Physical examination revealed body temperature of 38.2°C, pulse rate 80/min and blood pressure 120/80 mm/Hg. The abdomen was soft with tender hepatosplenomegaly 3 cm below costal margin. The skin lesions had begun with pruritus, including diffuse vesicular and maculopapular rash (Figure 1). No abnormal physical examination finding was present in other systems.



Figure 1. The typical diffuse vesicular and maculopapular rash on the patient's skin.

Results of laboratory tests made on admission were as follows; WBC: 1290/mm³ with 33% (430/mm³) neutrophils, Hgb 8.7 mg/dl, Htc 27.9%, PLT 158,000/mm³, Hb:10.7 g/dl, CRP: 8.49 mg/dL, ESR: 76/h, AST: 48 IU/L, ALT: 50 IU/L, GGT: 83 IU/dL. Abdominal ultrasound revealed hepatosplenomegaly.

Since he was working with livestock in endemic area for brucellosis and gave a history about the consumption of non-pasteurized dairy products, standard tube agglutination test (STAT) was performed. STAT titer was 1/640. Doxycycline (2 x 100 mg/day, PO) and Rifampicin (1 x 600 mg/day, orally) were started. On the 4th days of the treatment the blood work-up showed WBC 1710/mm³ with neutrophil predominance of 31%, neutrophil count 530/mm³, Hemoglobin 9.2 mg/dl, Hematocrit 28.1%, Platelet 125,000. One week after the initiation of the treatment our patient's skin lesions subsided and he became afebrile. After one week, WBC: 2290/mm³ with 42.8% (980/mm³) neutrophils, CRP 2.639 mg/dl, ESR 42/h, AST 34 IU/L, ALT 33 IU/L, GGT was 52 IU/L. The patient was discharged 8 days later. Ten days after the hospital discharge on outpatient control the WBC was 4800/mm³ with 60% (2880/

mm³) neutrophils. The patient received this treatment for six weeks. All the laboratory results at the end of the treatment were normal and no pathology was detected on the abdominal ultrasonography. There was no recurrence during the follow-up to 1 year after treatment.

DISCUSSION

Brucellosis is one of the most widespread zoonosis worldwide.⁸ In particular animal breeders, veterinarians, laboratory workers, abattoir workers, meat industry workers are at risk for brucellosis.⁹ Brucellosis is a systemic infection, ranging from asymptomatic disease to severe and/or fatal illness. Although osteoarticular involvement is the most common complication of brucellosis, all organs and systems can be affected by the complications.¹⁰ Therefore, brucellosis may appear very different findings.⁶

Despite of all recent technological advances and new antibiotics in use febrile neutropenia is still a serious diseases that may result with fatal consequences. Brucella is known to be a very rare cause of febrile neutropenia.¹¹⁻¹² Hematological abnormalities in brucellosis may vary; in a study of 104 cases 6.7% of the patients had leukopenia, 4.8% thrombocytopenia, 3.8% had thrombocytopenia, 2.8% pancytopenia.¹³

More than one skin lesions may be seen in 1-14% of brucellosis cases.¹⁴ In the study of Metin et al., of 14 cases 35.3% had urticarial like nodules and plaques.¹⁵ The most frequent reported skin lesions of brucellosis are maculopapules or papulonodules.¹⁵⁻¹⁶

Brucella appears with various clinical manifestations; therefore, it can represent a diagnostic difficulty for physicians when the disease occurs in unusual manifestations. We emphasize that especially in endemic areas brucellosis should always be kept on mind in the differential diagnosis of patient with skin eruption and febril neutropenia.

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