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Case Report

Two cases of brucellosis with atypical maculopapular rash recorded in siblings

Vefik Arica[1]*, Ali Karakuş[2], Seçil Arıca[3], Murat Tutanç[1], İbrahim Şilfeler[4] and Vicdan Köksaldı Motor[5]

[1]Pediatric Clinic, Medical Faculty, Mustafa Kemal University, Turkey.
[2]Emergency Medicine Clinic, Medical Faculty, Mustafa Kemal University, Turkey.
[3]Family Medicine Clinic, Medical Faculty, Mustafa Kemal University, Turkey.
[4]Pediatric Clinic, Hatay Hassa State Hospital, Turkey.
[5]Infectious Disease Clinic, Medical Faculty, Mustafa Kemal University, Turkey.

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Brucellosis is a zoonotic disease caused by bacteria of Brucella bacteria. It is still a frequently recorded disease in developing countries. Each year, 500,000 new cases of brucellosis develop globally and its incidence in our country, though varied with regard to geographical regions, was found between 1 to 26.7% in the studies conducted. Onset of the Brucella infections is insidious in almost half of the cases and takes time. Indications are not specific. Different symptoms and clinical findings which may be observed during the course of the disease could cause this disease to be sometimes taken for dermatological, hematological, cardiac, neurological, and rheumatologic diseases and that the case becomes difficult to diagnose. Skin involvement is also not widespread in brucellosis. This case is presented to highlight the fact that brucellosis should also be considered in the etiology, in the countries where brucellosis is endemic like in our country, for the patients applied to the hospital due to fever, loss of appetite, weight loss, abdominal pain and maculopapular rash. It was interesting that two brothers applied with the complaint of atypical rash and were diagnosed with Brucellosis.

Key words: Brucellosis, makulopapular rash, zoonosis.

INTRODUCTION

Brucellosis is primarily recorded in animals, however it spreads to humans through infected animals and coming in contact with their secretions directly or via intake of non-pasteurized milk and milk products (Shen, 2008). It is a globally recorded disease and is endemic in Middle and East Mediterranean Regions, which our country is also located in, Arabian Peninsula, Middle and Southeastern Asia, and Middle and South America. Brucellosis is a frequently seen zoonosis in our country (Tanir, 2009). Different symptoms and clinical findings which may be observed during the course of disease could cause this disease to be sometimes taken for dermatological, hematological, cardiac, neurological, and rheumatologic diseases and that the case becomes difficult to diagnose (Andriopoulos, 2007; Citak, 2010; Buzgan, 2010).

*Corresponding author. E-mail: vefikarica@hotmail.com. Tel: +90 326 2291000. Fax: +90 326 2455654.

CASE STUDY

Case 1

A 14-year-old male patient was hospitalized in our pediatric clinic due to weakness, loss of appetite, fever, muscle pain, abdominal pain, and weight loss initiated 3 weeks before and due to rash which emerged 2 nights before. Rash started to develop on face, neck, and the upper part of the body and was spread to the whole body and extremities the next day. Rash was of maculopapular type and not hemorrhagic. No itching was noted (Figure 1). Physical examination findings were as follows: Fever: 38°C, BP: 90/65 mmHg; PHR: 102/min/rhythmic, sclerae

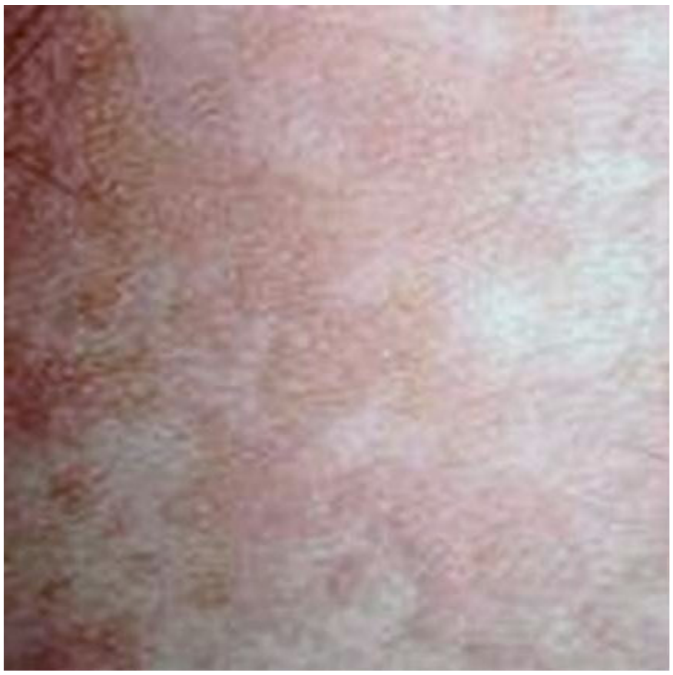

Figure 1. Maculopapular rash 14-year-old male patient (Case 1).

were slightly icteric, maculopapular rash and hepato-splenomegaly were determined. Primary laboratory findings were as follows: Leukocyte: 8,500/mm^3 (neutrophile 68%, lymphocyte 22%, monocyte 7%), thrombocyte: 72,000/mm^3, BUN: 24 U/L, creatinine: 0, 9 U/L, total bilirubin: 3,2 mg/dl, direct bilirubin: 2.1 mg/dl, SGOT: 248 U/L, SGPT: 182. Bilirubin was found to be positive in the urinary examination. Viral markers were found as negative. Serum Wright agglutination test was determined to be 1/640 positive at the time of hospitalization. *Brucella* spp. proliferation was recorded in the blood culture. Doxicycline 200 mg/day + Rifampicine 600 mg/day were administered for 6 weeks during the treatment. After the initiation of treatment, the rash regressed in 5 days. No clinical findings and atypical maculopapular rash were recorded in his follow-ups.

Case 2

A 16-year-old male patient was the elder brother of the first case and was living in the same house. His complaints started within the last week. He suffered episodical abdominal pain, muscle pain, loss of appetite, night sweats and weakness. When the deep history was completely received from the family, it was learned that there was a history of eating local fresh herby cheese. Physical examination findings were as follows: fever: 37.2℃, BP: 100/70 mmHg; PHR: 110/min/rhythmic were determined. While serum agglutination tests were being checked for Brucella for all of the family members, his test result was found 1/320 positive and he was hospitalized in the same service where his brother was staying. Treatment with Doxicycline + Rifampicine was initiated. However, maculopapular rash developed similarly on his face, neck and legs, 1 day after his hospitalization (Figure 2). The rash, was not itchy. The rash had spread throughout the body within 2 days. In the laboratory findings, thrombocyte was found abnormally as 122,000/ mm^3, and AST and ALT values were detected to be approximately 2 times higher. No proliferation occurred in his hemoculture. A rash disappeared 7 days after initiation of treatment. At the end of 6 weeks, full recovery was maintained both clinically and biochemically in both siblings.

DISCUSSION

Each year, 500, 000 new cases of brucellosis develop globally and 15,000 of those develop in our country. Its incidence in our country, though varied with regard to geographical regions, was found between 1 to 26.7% in the studies conducted (Ceylan, 2003; Karabay, 2004; Kose, 2006; Kaleli, 1999). Onset of the brucella infections is insidious in most of the cases and indications are not specific (Galanakis, 1996; Tsolia, 2002; Tasbakan, 2003). Symptoms were initiated 3 weeks before in both two cases we have followed-up and there were nonspecific complaints. Skin involvement is also not widespread in brucellosis and may be seen in approximately 5% of the patients (Edward, 2000). Information on the co-existence of brucellosis and maculopapular rash in the literature is small in number and cases presented in our country were

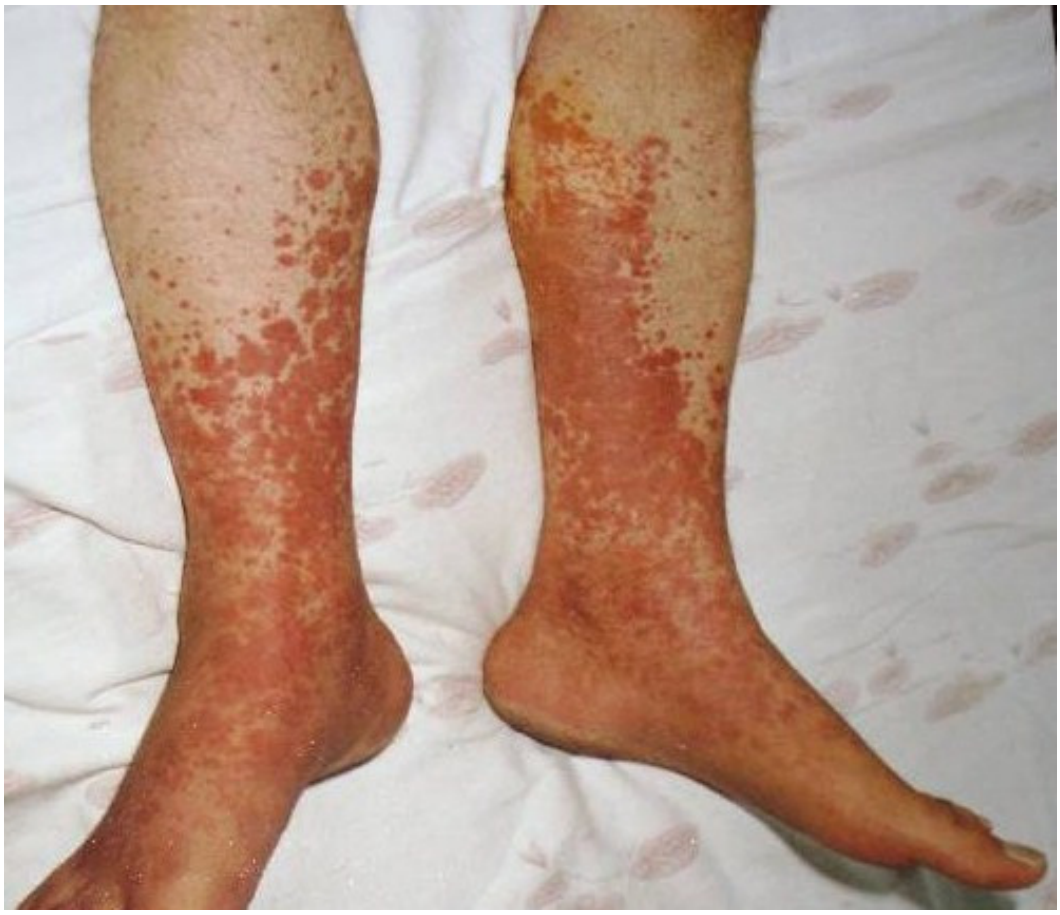

Figure 2. Maculopapular rash 16-year-old male patient (Case 2).

dominant generally (Ayaslioglu, 2009; Akcali, 2007; Milionis, 2000). During the toxic period when the disease progresses with high fever, maculopapular or erythematous skin rash could also be observed in a rare number of cases.

In series of cases recorded in our country, skin involvement in brucellosis was reported as 0 to 17% (Aygen, 2002; Namiduru, 2003; Demirdag, 2002). Maculopapular rash, urticaria, erythema nodosum, and primary inoculation dermatitis were noted most frequently, and palmar erythema, psoriaform rash, vasculitis, papulonodular lesions, and purpuric rash were reported rarely (Aygen, 2002; Metin, 2001). In another study conducted on 436 cases and continued for 12 years, skin lesion was identified in 6% of cases and papulonodular rash was the mostly recorded one among these (Ariza, 1989). Skin rashes may occur during the course of the disease, is thought to be due to immune complexes, direct inoculation, hypersensitivity, and hematogenous spread (Metin, 2001). Other laboratory findings supporting brucellosis were sedimentation increase, lymphomonocytosis formulated with leucopenia or normal leukocyte count, and increase in the amount of liver enzymes in the patient with occupational risk, anamnesis findings such as the history of eating fresh cheese made of non-pasteurized milk and symptoms suspicious for Brucellosis. Similar laboratory results were met in the followed cases as well.

CONCLUSION

Due to our country being an endemic region with regard to Brucellosis, diagnosis, treatment and follow-up of the disease are quite important. In spite of the brucellosis-fighting programs performed in our country, the infection rate is still at high level and causes damage to the national economy by affecting both the animal industry and human health. Especially in cases with subacute and chronic brucellosis, the possibility to establish a wrong diagnosis is high, due to the presence of nonspecific lesions when applied to the Department of Dermatology with a single finding of skin involvement. Thus, brucellosis disease developing with non-specific indications and findings should be considered in the differential diagnosis and identified at an early period.

REFERENCES

Akcali C, Savas L, Baba M, Turunc T, Seckin D (2007). Cutaneous manifestations in brucellosis: A prospective study. Adv. Ther., 24(4): 706-711.

Andriopoulos P, Tsironi M, Deftereos S, Aessopos A, Assimakopoulos G (2007). Acute brucellosis: presentation, diagnosis, and treatment of 144 cases. Int. J. Infect. Dis., 11(1): 52-57.

Ariza O, Servitje R, Pallarés P (1989). Characteristic Cutaneous Lesions in Patients With Brucellosis Arch. Dermatol., 125(3): 380-383.

Ayaslioglu E, Koçak M, Bozdogan O (2009). A case of brucellosis presenting with widespread maculopapular rash. Am. J. Dermatopathol., 31(7): 687-690.

Aygen B, Doganay M, Sümerkan B, Yıldız O, Kayabas U (2002). Clinical manifestations, complications and treatment of brucellosis: A retrospective evaluation of 480 patients. Med. Mal. Infect., 32(9): 485-493.

Buzgan T, Karahocagil MK, Irmak H, Baran A, Karsen H, Evirgen O (2010). Clinical manifestations and complications in 1028 cases of brucellosis: a retrospective evaluation and review of the literature. Int. J. Infect. Dis., 14(6): 469-478.

Ceylan E, Irmak H, Buzgan T (2003). In Van brucellosis seroprevalence of human and animal populations. Van J. Med., 10(1): 1-5.

Citak EC, Citak EF, Tanyeri B, Arman D (2010). Hematologic manifestations of brucellosis in children: 5 years experience of an anatolian center. J. Pediatr. Hematol. Oncol., 32(2):137-140.

Demirdag K, Özden M, Kalkan A (2002). Brusellosis: Retrospective evaluation of 146 cases. Flora, 7(2): 120-125.

Edward JY (2000). Brucella species. In: Mandell GL, ed.Mandell GL, Douglas RG, Bennet JE. Principles and Practice of Infectious Diseases 5th ed. Philelphia: Churchill Livingston, pp. 2386-2393.

Galanakis E, Bouratos KL, Leveidiotu S, Lapatsanis PD (1996). Childhood Brucellosis in North-Western Greece: A retrospective analysis. Eur. J. Pediatr., 155: 1-6.

Kaleli İ, Kocoglu T, Ozen M, Aksit F (1999). The prevalence of brucellosis in Denizli. J İnfeks, 13(2): 231-233.

Karabay O, Serin E, Tamer A (2004). Part of the province of Bolu, hepatitis B carriage and Brucella seroprevalence in urban and rural. Turk. J. Gastro., 15(1): 11-13.

Kose S, Smits HL, Abdoel TH, Ozbel Y (2006). Prevalence of Brucella antibodies in rural and suburban communities in three provinces of Turkey: Need for improved diagnosis and prevention. J. Infect., 53(5): 308-314.

Metin A, Akdeniz H, Buzgan T, Delice I (2001). Cutaneus findings encountered in brucellosis and review of the literature. Int. J. Dermatol., 40(7): 434-438.

Milionis H, Christou L, Elisaf M (2000). Cutaneous manifestations in brucellosis: case report and review of the literature. Infection, 28(2): 124-126.

Namiduru M, Gungor K, Dikensoy O (2003). Epidemiological, clinical and laboratory features of brucellosis; a prospective evalution of 120 adult patiens. Int. J. Clin. Pract., 57(1): 20-24.

Shen MW (2008). Diagnostic and therapeutic challenges of childhood brucellosis in a nonendemic country. Pediatrics, 121(5): 1178-1183.

Tanir G, Tufekci SB, Tuygun N (2009). Presentation, complications, and treatment outcome of brucellosis in Turkish children. Pediatr. Int., 51(1): 114-119.

Tasbakan MI, Yamazhan T, Gokengin D (2003). Brucellosis: a retrospective evoluation. Trop. Doct., 33: 151-153.

Tsolia M, Drakonaki S, Messaritaki A (2002). Clinical features, complications, and treatment outcome of childhood brucellosis in central Greece. J. İnfect., 44: 257-262.