

Letter to the Editor

Human mammary abscess caused by *Brucella melitensis*: a case report

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Brucellosis is an endemic zoonosis in rural areas in Greece. The disease usually presents as a systemic febrile illness; soft tissue localized infections due to *Brucella* spp. are uncommon in humans. We describe a 77-year-old woman with acute infection and a unilateral mammary abscess. Our patient was living in a rural area and bred animals. She had a 5-day febrile episode, 3 weeks before admission, accompanied by dry cough, and was given a second-generation oral cephalosporin. After being afebrile for 2 weeks, she was referred to our hospital because of diffuse arthralgias and painful swelling of her left breast. On admission, she had a temperature of 37.5°C, marked hepatosplenomegaly, normal cardiopulmonary findings, and a large painful abscess on her left breast, initially thought to be an inflamed tumor, because of her history of recurrent mastitis during the previous 40 years; no lymph nodes were detected. Laboratory tests revealed mild neutropenia (3250/mm³ leukocytes, 40% polymorphonuclear, 45% lymphocytes, 11% monocytes), elevated transaminases, a positive Wright agglutination test (1/320), an erythrocyte sedimentation rate of 70 mm/h, IgM and IgG antibodies for *Brucella* spp indicative of acute infection, and normal breast and gastrointestinal tumor markers. Chest X-ray revealed minimal cardiomegaly. An ultrasound investigation of the abdomen confirmed the hepatosplenomegaly without any abdominal lymph nodes; ultrasound of the breast revealed thickening of the subcutaneous tissues and multiple abscess formation. An ultrasonography-guided fine needle aspiration yielded abundant inflammatory cells, and necrotic tissues, but no cancerous cells. The biopsy material and blood cultures grew *Brucella* spp. that were both later identified as *Brucella melitensis*. The patient received doxycycline 100 mg b.i.d. for 8 weeks and streptomycin 1 g intramuscularly for 3 weeks. One week later, the abscess had clinically disappeared and the control ultrasound revealed a considerable decrease in the size of the lesions, so surgical drainage was not performed. The patient completed treatment, and remained free of symptoms 8 months later.

Systemic brucellosis is the most frequent clinical form of *Brucella* spp. infection, but hematogenous spread may result in focal forms of the disease. Although mastitis due to *Brucella* is described in animals, it is rarely reported in humans.^{1–5} Soft tissue locations are usually related to injury, but our patient had no history of trauma. She had probably inhaled infected aerosol while cleaning the stable. This could also explain cough as a relevant symptom. The unusual location may be attributable to the history of recurrent episodes of acute mastitis. Whether the combined treatment with doxycycline for 8 weeks and intramuscular streptomycin for 3 weeks is suitable for localized infections is not clear in the current literature. The follow-up for a period of 8 months was satisfactory, without clinical or laboratory relapse. Since *Brucella* is a slow-growing organism in culture, the possibility of misdiagnosing cases with unusual presentations is always a problem. Occupational history in endemic areas, along with standard tube agglutination tests and evaluation of epidemiologic data, may lead to early diagnosis and appropriate treatment.

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