

SHORT COMMUNICATION

Case report

Brucella melitensis dacryoadenitis: a case report

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PURPOSE. To present a case of brucellosis-related unilateral dacryoadenitis.

METHODS. A 16-year-old boy had unilateral lacrimal gland enlargement, shown by magnetic resonance imaging of the orbits. Clinical findings, tube agglutination, the culture of a lacrimal gland aspirate, and histopathological examination confirmed the diagnosis of brucellosis.

RESULTS. Tube agglutination testing for brucellosis gave a titer of over 1/640. The aspirate from the lacrimal glands grew *Brucella melitensis* and histopathological findings were consistent with brucellosis.

CONCLUSIONS. Dacryoadenitis may occur in the course of systemic brucellosis caused by *Brucella melitensis* (*Eur J Ophthalmol* 2000; 10: 259-61)

KEY WORDS. Brucellosis, *Brucella melitensis*, Dacryoadenitis, Extraocular manifestation

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INTRODUCTION

Brucellosis is a zoonosis transmitted from animals to humans. Humans are usually infected through the gastro-intestinal tract from unpasteurized dairy products but farmers, veterinarians, abattoir workers and meat-packers can be infected by contact through skin, blood, conjunctiva, gastro-intestinal and respiratory tract (1). It remains a health problem in developing countries and well-known endemic areas such as the Mediterranean and Middle Eastern countries.

A review of the literature revealed that uveitis and optic neuropathies are the most common ocular manifestations of brucellosis (2). Here we report a case of unilateral dacryoadenitis associated with brucellosis. To the best of our knowledge, this is the first case presenting brucellosis-related unilateral dacryoadenitis confirmed by serology, culture of aspirates from the lacrimal gland and histopathology.

Case report

A 16-year-old boy was admitted to Department of Ophthalmology of Gaziantep University Hospital with right proptosis lasting ten days, and eight months'

history of fever, malaise, generalized arthralgia, sweating and low back pain. He had been under treatments for brucellosis during these eight months but it had been not controlled because of inappropriate use of drugs on account of familial and socio-economic problems. He had no history of other systemic disease.

The right eyelid was displaced temporally with marked proptosis (exophthalmometry: 7 mm), and the left eyelid was normal (Fig. 1a). His best-corrected visual acuity, RE and LE, was 20/20. Slit-lamp and fundus examination were normal bilaterally. Intraocular pressure was also normal in both eyes. Pupillary responses were reactive.

Systemically, he had a temperature of 38.2 °C, and splenomegaly 3-4 cm palpable below the left costal margin. The hematocrit was 42%, white cell count 4800/mm³ with 52% neutrophils, 40% lymphocytes and 2% eosinophils. Erythrocyte sedimentation rate was 40 mm/hour. The chest X-ray and biochemical profile of blood were normal. Rheumatoid factor was negative. C-reactive protein was 4.2 mg/dl. *Brucella* antibody tests were done with a standard tube agglutination test and gave a titer over 1/640. MRI of the head showed a pattern consistent with unilat-



Fig. 1 - External view of the patient. **a)** Proptosis before treatment. **b)** After three weeks of antibacterial therapy for brucellosis.

eral dacryoadenitis (Fig. 2). Blood culture did not grow *Brucella melitensis*. Fluid aspirate from the lacrimal gland was cultured on blood agar but there was no growth. Then the aspirate from the gland was inoculated into Ruiz-Casteneda bottles and *Brucella melitensis* grew on the 7th day.

Histopathological examination of the lacrimal gland biopsy revealed intense plasma cell and lymphocytes infiltration, and fibrosis, confirming chronic inflammation.

The patient was started on Rifampin 600 mg/day and Doxycyclin 200 mg/day as a standard regimen for brucellosis. By the 3th week of treatment, proptosis had disappeared completely, one week before the clinical recovery from brucellosis (Fig. 1b). Treatment was continued for three more months with no steroids or non-steroidal anti-inflammatory drugs.

DISCUSSION

Brucellosis is a significant health problem in south eastern Turkey. Ocular manifestations of brucellosis are uncommon and uveitis and optic neuropathies are the most common ones reported. To our knowledge, this case of unilateral dacryoadenitis is the second one with *Brucella melitensis* infection after another case of ours who had bilateral dacryoadenitis associated with brucellosis.

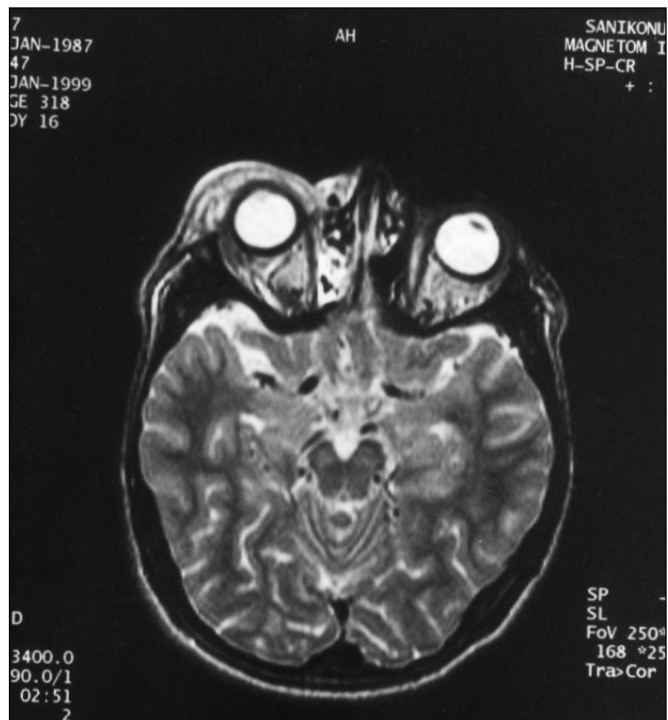


Fig. 2 - Magnetic resonance imaging shows unilateral right lacrimal gland enlargement.

A diagnosis of ocular involvement in brucellosis is based on the positive microbiological culture of the associated ocular structure, serology and clinical findings. Al Faran (3) reported that *Brucella melitensis* is a causative organism of endogenous endophthalmitis, using the tube agglutination test for brucellosis,

and cultures of aqueous humor and vitreous. Tabbara and Al-Kassimi (2) reported a woman who presented with recurrent attacks of uveitis unresponsive to treatment with steroids. They found she had a paravertebral abscess associated with brucellosis and she completely recovered using systemic antibiotics.

Although lacrimal gland invasion by *Brucella melitensis* is extremely rare, there are other invasion routes for brucellosis that further support serous exocrine gland pathology, such as mastitis and pancreatitis (4, 5). Thus, this case and our previous case indicate the lacrimal gland as one of the new organs that can be affected by brucellosis (6). Brucellosis-related dacryoad-

enitis thus appears to be a new extraocular involvement for an infectious response, compared to endophthalmitis as an intraocular involvement.

Brucellosis must therefore be kept in mind in the differential diagnosis of lacrimal enlargement as a cause of unilateral or bilateral dacryoadenitis in endemic areas.

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