

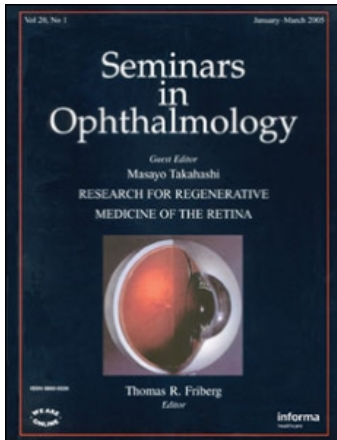
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Late onset of serologic positive titers in a patient with Parinaud's oculoglandular syndrome

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Late onset of serologic positive titers in a patient with Parinaud's oculoglandular syndrome

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Abstract

Purpose. To report a case of Parinaud's oculoglandular syndrome (POS) in which, despite the initially negative, a late onset of serologic positive titers was observed.

Methods. Case report.

Results. A 65-year-old man was examined for a foreign body in the left eye associated with granulomatous nodule on the palpebral conjunctiva, chemosis and a swollen preauricular lymph node. Despite the initially negative serologic titers to *Bartonella henselae*, a clinical diagnosis of POS was made and treatment was instituted initially with oral ciprofloxacin (500 mg twice a day). Three weeks later, serologic positive titers were found which confirmed the diagnosis of POS.

Conclusion. Even though the improvements in diagnostic testing such as indirect immunofluorescence antibody, negative titles could be initially observed, confusing the diagnostic process. Other techniques (such as polymerase chain reaction (PCR) testing) should be also taken into consideration in cases with increased clinical suspicious of *B. henselae* infections.

Keywords: Parinaud's oculoglandular syndrome; *Bartonella henselae*; Cat-scratch disease; indirect immunofluorescence antibody

Introduction

Parinaud's oculoglandular syndrome (POS) appears to be the most common ocular complication of cat scratch disease, affecting approximately 5% of symptomatic patients.¹ Patients with Parinaud oculoglandular syndrome typically complain about unilateral redness, discharge, lid swelling, foreign body sensation, epiphora and regional lym-

phadenopathy. Conjunctival lesions may involve either the palpebral or bulbar surface.

The diagnosis of cat scratch disease is based on the clinical features in combination with specific tests. Currently, the most widely accepted method is indirect immunofluorescence test [indirect fluorescent-antibody testing (IFA)] for the detection of serum anti-*B. henselae* antibodies.^{2,3} The sensitivities and specificities of this assay appear to be more than 90% for immunocompetent patients.

We report a patient with increased clinical suspicious of POS in which, despite the initially negative, a late onset of positive serologic titers was found three weeks after symptoms presentation.

Case report

A 65-year-old man was examined for a foreign body in the left eye associated with conjunctival chemosis and a swollen preauricular lymph node. The patient also complained for systemic symptoms such as headache and fever while he reported being scratched by a kitten one week before. A granulomatous nodule on the inferior palpebral conjunctiva with chemosis and injection was found (Figure 1). The anterior chamber and vitreous was quiet without any evidence of inflammation or other pathology from the posterior segment. Examination of the right eye was normal. The visual acuity was 20/20 in both eyes.

The patient underwent a standard diagnostic screening procedure, which consisted of chemistry panel; complete

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Figure 1. Left eye of a patient with Parinaud's oculoglandular syndrome, showing granulomatous nodule on the palpebral conjunctiva, chemosis and injection.

blood count with differential, angiotensin-converting enzyme; chest radiography; tuberculin skin test; and serologic tests for syphilis, borrelia, human immunodeficiency virus, bartonella and toxoplasma. Laboratory analyses revealed normal white blood cell count, platelets and hemoglobin. The erythrocyte sedimentation rate (ESR) was 26mm/h, and the C-reactive protein (CRP) level was 3.40mg/dl. The remaining laboratory tests were normal, while *B. henselae* IgG titer (indirect fluorescent-antibody testing) was 1 : 52 (reference range, $\leq 1 : 64$) with undetectable IgM titer.

Despite the initially negative titers for *B. henselae* and due to increased clinical suspicion of POS, the patient was placed on ciprofloxacin 500 mg orally, two times daily (a four weeks course). Four days after taking ciprofloxacin, systemic and ocular findings were generally improved.

Three weeks after the initial examination for *B. henselae*, an increase in serum IgG titer was found (1 : 1024) with negative IgM titers, which confirmed the diagnosis of POS.

Discussion

Neuroretinitis and conjunctivitis (POS) are widely recognized as the most common ophthalmic manifestation of *B. henselae* infection (cat scratch disease-CSD). In the majority of the patients the disease is often benign and self-limiting¹. However, in a small percentage, there is severe, permanent visual loss and ocular morbidity (neuroretinitis,

branch retinal artery occlusion, branch retinal vein occlusion, and angiomatic lesions).^{4,5} In parallel, antimicrobial therapy in cat scratch disease is controversial, since this disease may follow a prolonged but self-limiting course while early treatment seems to shorten the course of disease. All the above highlight the important role of laboratory confirmation of CSD clinical diagnosis.

Indirect immunofluorescence (IFA) test for detection of serum anti-*B. henselae* antibodies is the most widely accepted method for laboratory confirmation of cat scratch disease.^{2,3} In our patient, the finding of a late onset of positive serologic titers from clinical symptoms highlights the importance of clinical diagnosis and supplementary laboratory tests. Recently, a polymerase chain reaction assay for the detection of *B. henselae* 16S ribosomal RNA gene was developed; the assay is extremely sensitive and can identify specific *Bartonella* species.^{6,7}

In conclusion, despite the increased sensitivity and specificity of indirect immunofluorescence test [indirect fluorescent-antibody testing (IFA)] for the detection of serum anti-*B. henselae* antibodies, late onset of positive serologic titers from clinical symptoms of the disease can be observed. Our patient illustrates the importance of clinical diagnosis in patients suspected for CSD and the need of supplementary laboratory testing [such as repeated serologic measurements, enzyme immunoassay, histology or polymerase chain reaction testing (allows detection of *B. henselae*-specific DNA sequences)].

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