

Cat Scratch Disease with Ocular Symptoms

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Keypoints

What is known:

- Cat scratch disease, a zoonotic bacterial infection, occurs worldwide and is caused by *Bartonella henselae*, a fastidious, intracellular, and Gram-negative bacillus.
- Cat scratch disease typically manifests as fever and a papule, followed by lymphadenopathy in the nodes of the inoculation area.
- Currently, serological tests can confirm the clinical suspicion of infection by *Bartonella henselae*.
- Atypical manifestations develop in 5% of patients, which can be severe, difficult to diagnose, and lead to lasting impairment.

What is added:

- A high index of suspicion is essential to correctly diagnose and treat cat scratch disease, especially in the case of atypical symptoms.
- Despite the lack of standard treatment, most patients with ocular involvement have good visual outcomes.

Introduction

A 17-year-old female was referred with a four-week history of semilunar fold hypertrophy (Fig. 1). She developed a painless pink mass in the left nasal bulbar conjunctiva with sudden onset and without pruritus or vision loss. She also mentioned recent cervical adenopathy and night sweats but no history of fever, anorexia, weight loss, diarrhea, arthralgia, or rash. She was examined by an ophthalmologist and treated with an antihistamine, ciprofloxacin eyedrops, and topical prednisolone. However, she had only slight improvement.

Further physical examination revealed scratch lesions on the upper limbs and hypertrophy of the right semilunar fold. It also showed right anterior cervical adenopathy with a 3-4 cm longest axis and hard consistency, without inflammatory signs. The rest of the examination was typical.

Given the possibility of lymphoproliferative disease, she underwent an excisional biopsy of the conjunctival mass. The results showed inflammatory cells and a granuloma. Furthermore, laboratory data revealed positive immunoglobulin (Ig) G *Bartonella* serologies, with a titer of 1:1024. Other blood tests were unremarkable, and the chest radiography was normal. It was then discovered that the patient had a history of prior contact with kittens.

An oculoglandular syndrome related to cat scratch disease was thus confirmed. Therefore, the patient took oral azithromycin for five days. Afterward, she showed regression of the adenopathy and the semilunar fold hypertrophy. One month later, the IgG titer decreased to 1:256, and at a six-month follow-up, she was well and asymptomatic.

Cat scratch disease, caused by *Bartonella henselae*, causes cervicofacial lymphadenopathies in children and adolescents. Atypical manifestations (5%) include Parinaud's oculoglandular syndrome, neuroretinitis, encephalitis, osteomyelitis, endocarditis, hepatosplenic lesions, and fever of unknown origin.^{1,2} It was crucial to exclude lymphoproliferative disease in this patient due

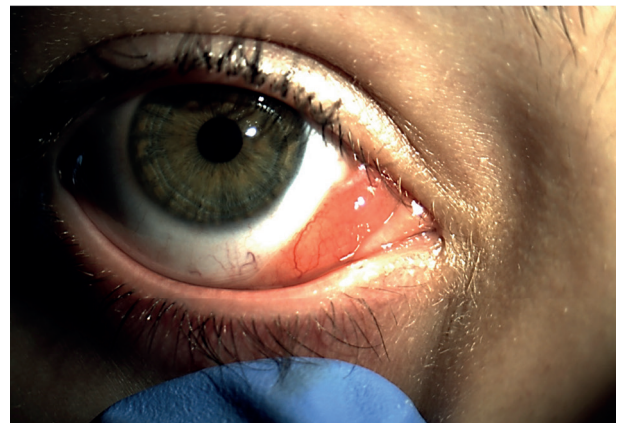


Figure 1. Semilunar fold hypertrophy.

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to the type of ophthalmological findings, history of night sweats, and the characteristics of the adenopathy. The diagnosis of cat scratch disease can be overlooked if the inoculation site is unapparent and there is no history of cat exposure.³

Keywords: Adolescent; Bartonella henselae; Cat-Scratch Disease/complications; Cat-Scratch Disease/diagnosis; Eye Infections, Bacterial/etiology

Author Contributions

STO participated in the study conception or design. STO, MV and SP participated in acquisition of data. STO and SP participated in the analysis or interpretation of data. STO and MV participated in the drafting of the manuscript. STO, SP and CS participated in the critical revision of the manuscript. All authors approved the final manuscript and are accountable

for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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Confidentiality of data

The authors declare that they have followed the protocols of their work centre on the publication of patient data.

Consent for publication

Consent for publication was obtained.

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