

Tick-infected upper eyelid of a chicken farmer:a Case Report

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Title:Tick-infected upper eyelid of a chicken farmer:a Case Report

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Key Clinical Message

A chicken farmer presented with a three day history of painless itching on the left upper eyelid for 3 days. A tick was found on the margin of the edema and erythema upper eyelid. The tick was removed intactly with fine-tipped tweezers. The patient had fully recovered without systemic symptoms.

KEYWORDS: case report, tick infestation, eyelid

Introduction

Ticks are ectoparasites which usually lie dormant on the grass and plants in shallow hills, or parasitize on animal fur. Tick infestation diseases are a variety of zoonotic infectious diseases, such as Lyme disease, Leptospira, scrub typhus and Q fever.^[1]The tick infestation of the eyelids is rare. We reported a case of a chicken-raising woman who received treatment in our hospital because of a tick bite on the upper eyelid.

Case History:

A 48-year-old woman presented with a complaint of painless itching on the left upper eyelid that had persisted for three days. She had a history of raising chickens in the mountains year-round and did not report any other significant medical issues.

Examination:

During examination using a slit lamp, a gray tick was discovered attached to the margin of the edematous and erythematous upper eyelid (Figure 1 A). No other ocular abnormalities were observed.

Differential Diagnosis:

Given the patient's history and symptoms, the differential diagnosis included tick infestation of the eyelid, which was confirmed by the presence of the tick during examination. Other possible causes of eyelid irritation, such as conjunctivitis or eyelid dermatitis, were considered but ruled out based on the patient's symptoms and examination findings.

Investigations and Treatment:

The affected area and the tick itself were topically anesthetized with procaine for five minutes. The tick was then gently shaken and removed intactly using fine-tipped tweezers (Figure 1 B, C, and D). Immediately following removal, 10% povidone iodine was applied to the eyelid area to prevent infection. The patient's eyes and other body parts were examined carefully, and no additional ticks were found. Laboratory tests, including hemogram, biochemical, and serologic tests, were performed and were normal, ruling out other tick-associated diseases such as Congo hemorrhagic fever, Lyme disease, tularemia or Q fever..

Outcome and Follow-up:

The patient recovered completely without any systemic symptoms. She was followed up for one month, and no further issues were reported. The tick infestation of the eyelid resolved with no complications, and the patient's symptoms resolved completely.

Discussion

Previous reports showed tick infections could be located on the conjunctiva or eyelid.^[2] Ticks are known to transmit numerous infectious diseases to humans, such as Lyme disease, *Leptospira*, scrub typhus and Q fever. In this case, we report a 48-year-old chicken-raising woman who presented with a gray tick on her itched upper eyelid, which may be related to her close contact with chickens. She was found redness, swelling and itching of the upper eyelid after being bitten by a tick. Fortunately, the patient did not deal with it by herself, and she asked for ophthalmologists. The tick was removed intactly, and the patient did not have fever, diarrhea, or other system symptoms.

Patients with tick infestation should see a doctor immediately. In addition, in order to prevent tickborne disease, removal of the tick from the affected tissue completely is important. Tick attached skin closely which is not easy to be pulled out. Pulling out tick directly could induce breakage of tick and secondary damage of the skin. Therefore, local anesthetic can be applied to the head of tick. The careful, mechanical extraction of ticks using fine-tipped tweezers is safe and effective.^[3, 4] When the tick naturally falls from the skin, the wound should be disinfected immediately. If its mouth is broken, it should be removed by operation. After removal of ticks, the patients should undergo hemogram, biochemical and serological tests. The local eye diseases and systemic symptoms caused by tick infection should be excluded during clinical observation and follow-up. ^[5, 6]

AUTHOR CONTRIBUTIONS

Qibin Xu: Formal analysis, Methodology, Writing – original draft; **Huoyan Lian:** Resources, Writing – original draft; **Zhiyi Hu:** Conceptualization, Supervision, Writing – review & editing.

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CONFLICT OF INTEREST STATEMENT

None declared.

CONSENT

Written informed consent was obtained from the patient to publish this report.

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Figure 1. (A and B and C and D) A gray tick was found on the upper eyelid and was removed intactly with fine-tipped tweezers.

