

Research Article

Tick Infestation of the Eyelid: Two Case Reports

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ABSTRACT

Background: Tick infestation of the eyelid is an uncommon ophthalmic condition that may mimic benign eyelid lesions and delay diagnosis. Prompt recognition and complete removal are essential to prevent local complications and the transmission of tick-borne diseases.

Case Presentation: We report two female patients, aged 55 and 70 years, who presented with painful, erythematous swelling of the upper eyelid associated with a brownish wart-like lesion. Slit-lamp examination revealed attached ticks, identified clinically as a soft tick in the first case and a hard tick in the second. Both ticks were carefully removed intact using blunt toothless forceps without rupture. The specimens were sent for microbiological evaluation, and laboratory investigations were performed to assess possible systemic involvement. Both patients received prophylactic antibiotic therapy and were advised regarding symptoms of tick-borne illnesses. No systemic manifestations were observed at presentation.

Conclusion: Eyelid tick infestation is a rare but clinically significant condition that requires a high index of suspicion. Careful slit-lamp examination, complete tick removal, and appropriate follow-up are crucial to minimize ocular and systemic complications. Awareness of this uncommon presentation can facilitate early diagnosis and successful management.

Keywords: Tick Infestation; Eyelid, Ocular Tick, Case Report, Slit-Lamp Examination, Tick-Borne Diseases.

INTRODUCTION

Ticks are obligate blood-feeding ectoparasites belonging to the families Ixodidae (hard ticks) and Argasidae (soft ticks) and are recognized as important vectors of several zoonotic infections, including Lyme disease, Crimean–Congo hemorrhagic fever (CCHF), tularemia, and Q fever. Although tick bites commonly involve exposed areas of the skin, infestation of the eyelid is extremely rare and may be easily mistaken for benign eyelid lesions such as nevi, papillomas, or cysts. (1,2)

Ocular tick infestation may present with eyelid swelling, erythema, pain, itching, or a pigmented nodular lesion. Delayed diagnosis or improper removal can increase the risk of local inflammatory complications, granuloma formation, abscess, and transmission of tick-borne pathogens. Therefore, careful slit-lamp examination and complete removal of the tick without crushing its body are essential for successful management and prevention of systemic complications.(2,5)

Because of its rarity, only a limited number of cases have been reported in the ophthalmic literature. Reporting additional cases helps improve clinicians' awareness of this uncommon condition and highlights the importance of early recognition, appropriate management, and patient counseling. In this report, we describe two cases of eyelid tick infestation that were successfully managed by complete mechanical removal, followed by clinical evaluation and preventive management.

Case report

Case 1

We report a case of 55 years old female who presented to us with history of trauma to right eye five days back while giving feed to cows. On examination there was erythema and swelling in right upper eyelid extending to inferior orbital margin. A wart like brownish lesion was seen in right upper eyelid medially anterior to lash line. Blob of blood clot was seen adjacent to wart like lesion. On slit lamp examination that wart like lesion turned out to be soft tick. A tick was seen

firmly attached to the right superior eyelid margin with ventral part showing three pairs of legs. It was carefully removed with blunt toothless forceps and removed as whole taking care not to damage its body. After removal it was seen moving on the surface. Patient was unaware of live tick infestation in her eyelid. She assumed it as mole. Patient did not have any systemic symptoms at presentation. We sent the specimen to microbiological department for identification of species and further characterization. Complete hemogram and serological tests were ordered to determine the systemic complications. Patient was given antibiotic prophylaxis and was informed in details about systemic symptoms of tick bite.

Case 2

We report another case of 70 yrs old female who came to our opd with history of itching in left eye since 3 days. There was history of redness and pain in left eye. On examination there was erythema and swelling present on left upper eyelid extending to lower eyelid medially. A wart like brownish lesion was seen in left upper eyelid medially. Blob of blood clot was seen adjacent to wart like lesion and over left lower eyelid. On slit lamp examination that wart like lesion turned out to be hard tick. A tick was seen firmly attached to the skin of left superior eyelid with ventral part showing three pairs of legs. It was carefully removed with blunt toothless forceps and removed as whole taking care not to damage its body. Patient did not have any systemic symptoms at presentation. We sent the specimen to microbiological department for identification of species and further characterization. Complete hemogram and serological tests were ordered to determine the systemic complications. Patient was given antibiotic prophylaxis and was informed in details about systemic symptoms of tick bite.

DISCUSSION

Ticks are blood-sucking arthropods belonging to the families Ixodidae (hard ticks) and Argasidae (soft ticks). They are ubiquitous arthropods found across various continents, including North America, Europe, Africa, and Asia. (6) Hard ticks are more common than soft ticks and are more likely to transmit diseases to humans. Compared with soft ticks, Ixodidae attach painlessly to the host and often remain unnoticed until they

become fully engorged. Hakamia et al. reported a similar case of eyelid tick infestation that was successfully managed by complete tick removal, highlighting the importance of early diagnosis and prompt treatment. (3)

Lin et al reported similar case of right lower eyelid pigmented nodule associated with pain, tingling and numbness of cheek for 1 week. Ticks along with its waste was identified and removed successfully. After a month she developed a localized pruritic erythematous rash. Later she was diagnosed as tick bite related contact dermatitis (Lin et al, 2016).

Bowes et al. also described tick infestation of the upper eyelid presenting as an eyelid lesion and highlighted the importance of early diagnosis and prompt removal. (4)

Removing ticks wholly from the affected tissue is of higher importance in the prevention of tick-borne diseases and possible abscess, granuloma, or other local lesions 5. Most of times patients are unaware about tick bite and come with complaint of sudden growth on eye lid, however the clinical presentation of growth may vary. The lack of familiarity in the management of these patients may result in less than desirable outcomes. Morbidity increases substantially with the duration of the infestation, the tick should be completely removed as soon as possible. Similarly, Shrestha et al. reported that eyelid tick infestation may mimic a benign eyelid nodule, making careful ocular examination essential for timely diagnosis. (9) Park and Suh recommended complete removal of the tick with fine forceps to minimize retained mouthparts and local inflammatory reactions. (7)

CONCLUSION

This report illustrates the need for a high index of suspicion as tick bite while dealing with sudden onset rapidly growing lesion especially in endemic areas and patients coming from rural environment. Clinicians should be aware of possible systemic diseases associated with tickbite. Ophthalmologists are rarely confronted with ectoparasites and should be aware of rare occurrence of tick infestation of ocular tissue.

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Figure 1. Tick Attached to the Upper Eyelid



Figure 2. Tick after Complete Removal



Figure 3. Removed Tick with Millimeter Scale

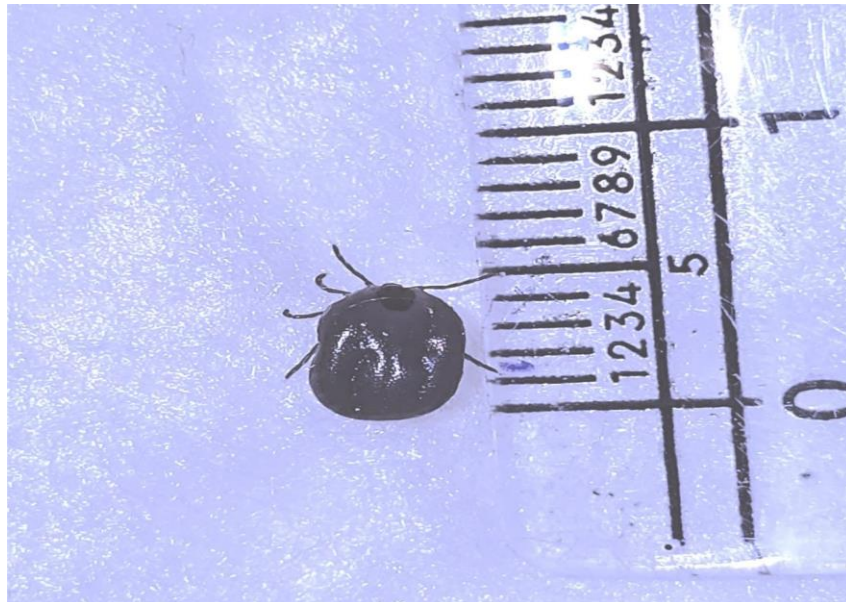


Figure 4. Magnified View of the Removed Tick