# PAINFUL MOVING LID MASS IN CHILD

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## ABSTRACT

**An eight-year-old boy presented with a painful mass on the lower lid. Examination revealed what looked to be a pyogenic granuloma. During removal with a forceps, the mass appeared to be animate. Examination under slit-lamp microscopy revealed an insect, complete with body parts. Subsequent laboratory examination identified it as Ixodes.**

***(Work originated from National University Hospital. Department of Ophthalmology)***


## INTRODUCTION

Tick infestations of the lid are not common in urbanized societies such as Singapore. Moreover, any mobile lid mass is rarely seen in a general ophthalmology clinic. I present a case illustrating the diagnostic and therapeutic challenge of managing such a condition.

## MATERIALS AND METHODS

An eight-year-old Malay boy presented to the hospital with a two-day history of painful mass on the left lower eyelid margin. He did not complain of eye redness or blurring of vision. He did not experience any trauma to the left eye. He did not have any significant medical history.

His visual acuity was 20/20 in both eyes without correction. There was a lower lid margin lesion, measuring two mm by two mm, located near the medial canthus, about 5 mm lateral to the lacrimal punctum. It was pale brown, immobile, and had a flat top, with surrounding erythema of the lower lid. It appeared solid, pedunculated and uniformly pigmented. The margins were well defined, and there were no telangiectasias or lash loss. There was no conjunctival injection or corneal lesions. There was no regional lymphadenopathy.

The initial differential diagnoses were pyogenic granuloma, or a scab of the lower eyelid due to innocuous trauma sustained recently. He was seen by an oculoplastic surgeon, and was deemed safe for removal in the clinic setting at the slit lamp with a forceps, without need for excision of margins. Gutt tetracaine 1% was administered to the eye. A colibri forceps was used to grasp the edges of the mass at a slit lamp. As the forceps approached the mass, the mass moved slightly. Prompt removal of the mass and inspection under the slit lamp revealed an insect, still alive and mobile. The removal process was smooth and painless. Examination of the lid after the removal of the insect revealed embedded limb appendages, which were subsequently removed with forceps. The residual parts appeared like fine pink hairs. The underlying skin was slightly erythematous, with punctate hemorrhages. There was some resistance on removal of both the body and limbs of the tick, but the patient tolerated the procedure well. The offending agent was taken to the microbiological laboratory, and was subsequently identified as Ixodes ricinus.

The patient was discharged with oral cloxacillin for one week, and topical fusidic acid ointment. He subsequently made good recovery.

## DISCUSSION

Lid masses in children pose a diagnostic dilemma to clinicians of all specialties. Most cases are benign. These include chalazia, hordeolums, molluscum contagiosum, cysts of Moll, sebaceous cysts, milia etc. Rarely, they may include tumours like melanomas. (see Table 1)

Most cases are straightforward, and the history and physical examination making the diagnosis easy. However, a diagnosis of insect or parasitic infestation of the lower lid may not be apparent in ophthalmological practices in urbanized locales like Singapore. In this case, on retrospective questioning, the patient revealed a history of travel to a rural Malaysian village two days ago to visit his relatives. He did not remember being bitten by any insect, and only noticed the lid mass while looking into a mirror. The pain was gradual in onset, slowly increasing in intensity due to secondary infection of the lid. A clinical suspicion of a tick masquerading as a lid mass should have been entertained, in view of the acute onset, pain and history of contact in a jungle environment.

**Table 1: Differential diagnoses for lower lid lumps in children**

Benign
- Chalazion
- Pyogenic granuloma
- Hordeolum
- Molluscum contagiosum
- Melanocytic naevus
- Capillary haemangioma

Malignant
- melanoma

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Ticks are parasites that are found infesting skin of mammals like sheep and human beings. They are from the genus Ixodes, and obtain their nutrition from the blood of other animals. They are vectors for the transmission of diseases caused by microorganisms like Borrelia burgdorferi and Rickettsia conorii, although these diseases are not endemic in Singapore. Tick infestations can be tricky to handle. Without the aid of a microscope, they resemble lesions like cysts, naevi, granulomas and scabs. Removal can be difficult. The parasite scores the skin before inserting its barbed hypostome to anchor itself to the skin. It secretes a cement-like substance around the barbs[1]. Various methods have been described to remove the tick. These include the use of tweezers, glue, alcohol and block excision of tissue around the tick[1-2]. Oteo et al advocate the use of tweezers for safe removal of ticks[2]. We used a colibri forceps, which was suitably sized for microscopic removal with the aid of a slit lamp (see Figure 1). It was essential that a small forceps like that was used, as the tick was only two mm long. Tweezers may be too large to allow for identification of the mass. Being near sensitive organs like the eye, I would not advocate the use of caustic agents that are potentially sight threatening, like glue, alcohol or other solvents, especially for children who may not cooperate well.

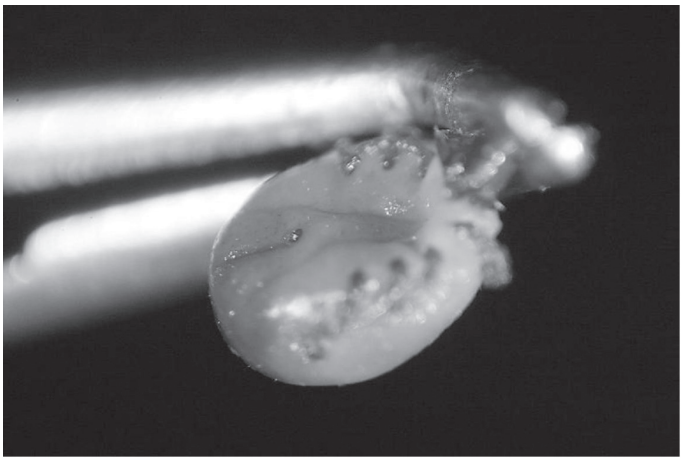

Figure 1: Close up view of Ixodes at the slit lamp after removal. This photo shows the ventral surface of the tick, which was apposed to the lid margin. The dorsal surface, not shown here, was pale brown, solid and appeared pedunculated, mimicking a pyogenic granuloma.

The use of a microscope or loupes for proper visualization of the wound post-removal also proved vital. It allowed for identification of tick body parts. Failure to remove those body parts could easily have led to a granuloma or abscess, necessitating further treatment. Complications of tick infestations of the lid are rare, although case reports of ocular paralysis[3]. Systemic infections like Lyme disease and erythema migrans are possible. In this case, the usage of the Colibri forceps for removal was found to be easy for both the doctor and patient.

The usage of antibiotics post-removal is controversial[2,4]. While antibiotics post-removal may prevent infections like Lyme disease and lid cellulitis, it may not be cost effective[5]. Shapiro et al. have concluded that even in areas where Lyme disease was endemic, the routine use of antibiotic prophylaxis for uncomplicated tick bites was not justified. In urbanized settings like Singapore where Lyme disease and tick infestations are not common, antibiotics for Lyme disease prophylaxis were not warranted. Cloxacillin was prescribed in this case due to clinically evident cellulitis of the lid. Even this could be an overkill; the skin reaction from tick bites may be due to aseptic foreign-body eosinophilic cellulitis rather than a true bacterial skin infection.

In conclusion, even in urban practices, clinicians should always entertain the diagnosis of tick infestations of the lid[7]. This case illustrated the unexpected diagnosis of a lid tick infection initially thought to be an inanimate mass like a pyogenic granuloma or scab. A recapitulation of the potential sources, complications of lid tick infestations, and various modalities of removal were discussed. Although there is potential benefit in the routine use of antibiotics to prevent systemic diseases borne by ticks, it remains controversial whether it should be used in all cases of uncomplicated tick bites.

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