

A peculiar ocular itch in two children

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Abstract

Pubic louse is an uncommon cause of ocular itchiness in children. While pubic lice are often transmitted sexually from the pubic hair of one person to another, they may also be contracted from contaminated items, such as bed linen, clothes and towels. Nonetheless it is vital for the attending clinician to maintain a high index of suspicion in children who present with *Phthirus pubis* palpebrarum infestation and rule out sexual abuse. We report 2 cases of childhood pubic lice infestation over the eyelashes without evidence of sexual exposure. Both cases were successfully treated with mechanical removal of the eyelashes and lice in combination with topical medications.

Key words: Eye infections; parasitic; Eyelashes; Hair diseases; Lice infestations; *Phthirus*

Introduction

Phthirus pubis, more commonly known as pubic lice, infest the hairs of the pubic and perianal regions but can occasionally be found on other body parts with hair, no matter the hair is sparse or coarse. Pubic lice are typically transmitted sexually and may coexist with other sexually transmitted diseases. They are most commonly encountered in sexually active individuals and transmission is not prevented by the use of condoms.¹ Non-sexual transmission has been demonstrated in the homeless population with poor personal hygiene.² Pubic lice can also appear in children but are usually confined to the eyebrows or eyelashes (*Phthirus pubis* palpebrarum).³ In children, the source of transmission is most commonly an affected parent via shared towels, clothes or bed linen.⁴ Although sexual abuse is rarely the

case in parent-to-child transmission, clinicians should always maintain a high index of suspicion and refer the child to a pediatrician for detailed assessment if needed.¹

Case reports

Case 1

A 9-year-old girl with good past health presented to the ophthalmology clinic with pruritus and redness over her right eyelid for 20 days that was refractory to topical antibiotics in March 2011. On slit-lamp examination, lice were detected at the base of the upper eyelashes, revealing multiple red pin-point excretions and numerous translucent oval eggs coating the eyelashes (**Figure 1**).

On systemic review, there were no nits in the hair of her scalp. She denied any history of sexual abuse or sexual contact. Her family members denied any history of pubic lice infestations or other sexually transmitted diseases. Nevertheless the child was referred for further assessments by the pediatricians and medical social workers.

For management of her *Phthirus pubis* palpebrarum, she was treated with mechanical removal of all lice and nits by epilation of all eyelashes followed by a single application of a topical permethrin 1% lotion for 10 minutes. Permethrin 1% was applied in the hospital setting to the hair including eyelashes but not the eyebrow region. Four weeks after treatment, lice were completely eradicated.

Case 2

A 5-year-old girl with good past health complained of pruritus and non-specific irritation over both eyelid margins for 10 days in November 2012. Her parents noticed 'moving organisms' in their child's eyelashes bilaterally and in the hair of her scalp (**Figure 2**).

Slit-lamp examination showed erythematous, crusted eyelid

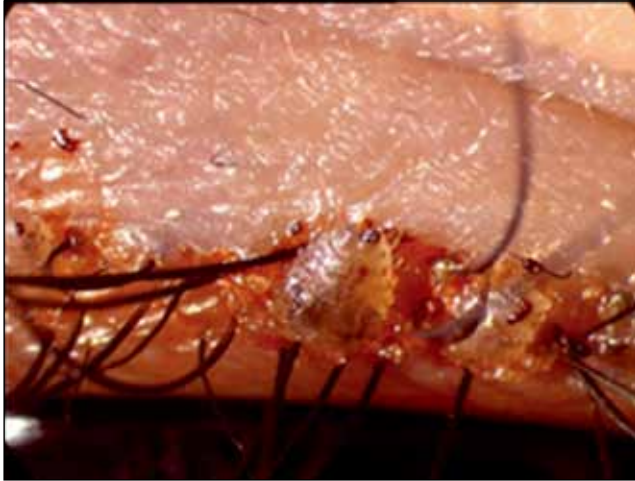


Figure 1. Slit-lamp photo of lice and nits coated on the eyelashes.



Figure 2. Slit-lamp photo of lice and nits coated on the lashes.

margins, and multiple lice and nits coating both eyelashes. On dermatological examination, there were also nits in the hair of her scalp. There was no evidence of sexual abuse. Examination of her parents and grandparents did not show any lice infestation.

The child was treated by trimming of all her eyelashes followed by application of a mixture of pilocarpine 4% eye drops with vaseline applied 4 times daily for 10 days over the eyelid margins. Her scalp and eyebrow were empirically treated with a local application of malathion 0.5% shampoo twice daily after washing and drying of her hair and eyebrows even though there was no direct eyebrow involvement. She was also advised to wash all potential fomites include bedding, towels and clothes in hot water. At 8 weeks after treatment, there was complete eradication of the lice and nits over both eyelashes and scalp (**Figure 3**).

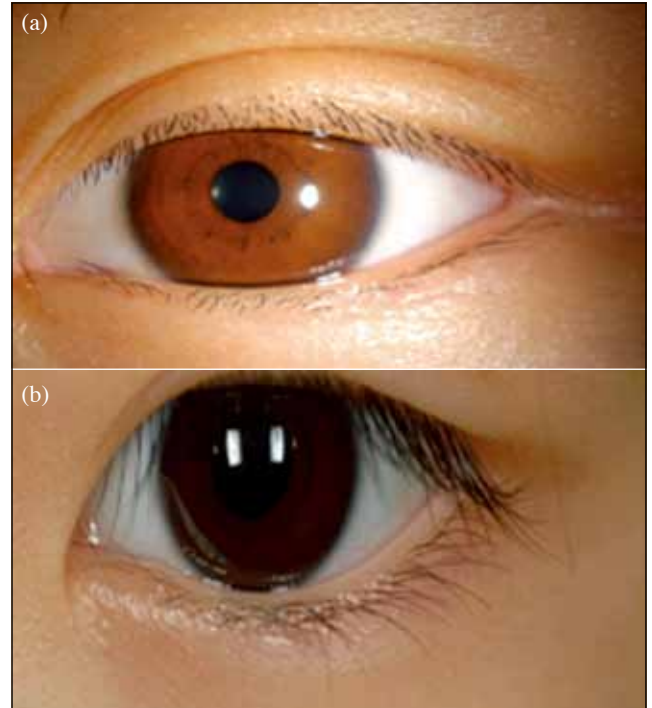


Figure 3. (a) One week after trimming of eyelashes, and (b) 8 weeks after trimming of eyelashes with complete resolution of the lice.

Discussion

Phthirus pubis palpebrarum refers to eyelid infestation by *Phthirus pubis* (pubic lice or crab).⁵ The symptoms include pruritus over the eyelid margins, conjunctival injection and blepharitis.⁶ Typically, pubic lice infest the hairs of the pubic and perianal regions but they may also affect other body parts where there is hair, no matter the hair is sparse or coarse, including beards, moustaches, eyelashes, armpits, and sometimes the trunk. If children are infested, the lice are usually localized to the eyebrows or eyelashes.⁷ Due to its fine texture and closeness of the shafts, hair on the scalp is usually not a preferred habitat for *Phthirus pubis* but they are sometimes found at the margins of the hairline on the head. There was no eyebrow involvement in our 2 cases although care should be taken to examine the brow in the same manner as the scalp, to look for nits in the hairs. If the brow is involved, topical insecticide lotion should be applied (e.g. malathion shampoo or permethrin lotion).

Transmission of pubic lice in adults is typically through sexual contact. In children, infestation is commonly through contaminated fomites, particularly in those with poor personal hygiene or living in crowd conditions.^{8,9} While sexual transmission is not a common route of infestation in children, it must always be ruled out by the attending clinician.

There are various treatment options for *Phthirus pubis* palpebrarum, including mechanical removal of the lice

and nits with forceps combined with application of topical insecticides, cryotherapy or argon laser photocoagulation. In general, medical treatment should comprise topical insecticides (malathion shampoo or permethrin lotion) for the body and topical Pilogel (SA Alcon-Couvreur NV, Puurs, Belgium) for eyelid margins, as it is less irritating. There are a number of insecticides proven to be effective against pubic lice. Ashkenazi et al¹⁰ used a regimen of 1% yellow mercuric oxide ointment 4 times daily for 14 days to effectively treat 35 patients with *Phthirus pubis* palpebrarum. Burns¹¹ alternatively used Lindane (Morton Grove Pharmaceuticals, Inc. Parsippany [NJ], USA) 1% lotion although Lindane may cause neurotoxicity. Other insecticides available include malathion drops 1%, malathion shampoo 1%, and permethrin 1% lotion. It has also been suggested that anticholinesterase agents such as physostigmine 0.25% or Pilogel 4% can be used to treat lice.^{12,13} As Pilogel is not available in Hong Kong, pilocarpine 4% eye drops mixed with Vaseline (Unilever, Trumbull [CT], USA) was used as an alternative treatment in our second case.

In addition to topical medication, Burkhart and Burkhart¹⁴ advocated the use of oral ivermectin to eradicate *Phthirus pubis* palpebrarum. For pubic lice infestation, it is important to examine all contacts and delouse all contaminated objects as per the guidelines of the Centers for Disease Control and Prevention: (1) use hot water (at least 60°C) for laundry cycle and use the high-heat drying cycle for all clothes and bedding of infested patients, and (2) dry clean non-washable materials or simply seal in a plastic bag for 2 weeks.¹⁵

Conclusion

Phthirus pubis palpebrarum is an uncommon but potential cause of ocular itchiness in children. Treatment is simple and effective once the diagnosis is made. Although sexual contact is not a common route of transmission in children, it should always be ruled out by the attending clinician. To prevent recurrence, the child and family members should be educated about personal hygiene and thorough disinfection of fomites should be carried out.

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