Mechanical Treatment of Pthiriasis Palpebrarum

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Pthiriasis palpebrarum is a rare disease in which crab lice infest the eyelashes. It can cause pruritic lid margins or unusual blepharoconjunctivitis and is difficult to diagnose and treat. We diagnosed and managed a case of pthiriasis palpebrarum in both upper eyelids, accompanied by nits, on the scalp of a 6 year-old female child. We removed the eyelashes, including lice and nits, by pulling with fine forceps without sedation. On the second month after treatment, all lice and nits were eradicated without recurrence and the eyelashes grew back. In conclusion, pthiriasis palpebrarum can be diagnosed by close examination of the eyelashes and eyelid margins with slit lamp and can be managed mechanically.

Key words: eyelashes, crab louse, nits, pthiriasis palpebrarum

INTRODUCTION

Lice are wingless, flattened, blood sucking insects which cause three varieties of pediculosis in humans when sanitary conditions are inadequate. Among them, Phthirius pubis (crab louse), which causes pediculosis pubis, infests mainly the hair of the pubic and inguinal regions, or rarely the eyelashes (Pthiriasis palpebrarum), the hair of axillae, chest, or rectal regions.1-4 Pthiriasis palpebrarum, which can cause pruritic lid margins or unusual blepharoconjunctivitis, is difficult to diagnose and to treat medically and socially.1

We report a case of pthiriasis palpebrarum accompanied by nits on the scalp, which was treated successfully with mechanical removal of the lice and nits on the eyelashes.

CASE REPORT

A six-year-old female child complained of itching and irritation of both eyes for 3 days. She had no specific ocular or systemic disease. Slit lamp examination showed reddened, crusty eyelid margins and hyperemic palpebral conjunctiva. Mobile, semitransparent lice were detected at the base of the eyelashes and numerous, translucent, white nits were adherent to the eyelashes at both upper lids (Fig. 1). Under magnification, each louse had three pairs of legs attached to the anterior portion of the abdomen and grasped the eyelashes with the claws of the second and third pairs. Two antennae, four pairs of small feet on the posterior portion of the abdomen, and pigmented digestive material in the abdomen were also visible (Fig. 2). There was no abnormal finding in the cornea. On dermatologic examination, there were nits on the scalp hair, but no pediculi were found. Her parents denied any past history of sexual contact or venereal disease but refused any
Fig. 1. Phthiriasis palpebrarum. Mobile louse (A) embedded in the lid skin is seen at the base of the eyelashes, and nits (B) are attached to the eyelashes.

Fig. 2. Microscopic view of a louse and nit. A crab louse is grasping the cilia and a nit (arrow) is attached to the cilia shaft. (Unstained X40)

further examination into the louse infestation.

We mechanically removed the eyelashes, includinglice and nits, by pulling with fine forceps under slit lamp microscopy. Tobramycin ointment (Tobrex; Alcon, USA) was applied on the eyelid margins to prevent secondary infection and crotamiton ointment (Uracin; Sang-A, South Korea) was applied on the scalp simultaneously. On the second month after treatment, all lice and nits were eradicated without recurrence and the eyelashes grew back.

DISCUSSION

Three varieties of flattened, wingless lice which require host hair commonly attack humans and cause pediculosis. They are Pediculus humanus corporis (body louse) on the seams of clothing, and Phthirus pubis (pubic or crab louse) mainly in the hair of pubic and inguinal regions.1,2 Pediculosis is common in developing countries because of inadequate sanitary conditions, and there has been a resurgence of pubic louse infestation from increased sexual activity among adolescents.5

The crab louse which causes pediculosis pubis can also infest the eyelashes (phthiriasis palpebrarum), and the hair of axillae, chest, or rectal regions by spreading from one hairy area to another.1-4 In children, eyelashes are the most common sites of infestation because of specific temperature and moisture requirement, as well as the lack of terminal hairs on most body regions in prepuberty.6 The crab louse is different from the head and body lice, being of smaller size (usually 2 mm or less), and possessing a broad oval abdomen with stout, claw-like legs resembling a crab.7 In our case, in addition to the crab lice and nits in the eyelashes, there were nits on scalp hair. We could not find pediculi on the scalp, so it was uncertain whether the nits on the scalp were associated with pubic louse or coexisting head louse (pediculosis capitis). But we considered that the physician must examine the scalp in all children with phthiriasis palpebrarum.

The symptoms associated with phthiriasis palpebrarum range from pruritic lid margins to blepharitis with marked conjunctival inflammation, occasional lymphadenopathy, and secondary infection at the
site of the lice bites. Blood-tinged debris on the eyelids and eyelashes is common. Occasionally, maculae caeruleae, which are characterized by classic peculiar blue spots, may be seen on the infected lid margins. A case of marginal keratitis by crab louse has been reported. The lice are difficult to identify because of their semitransparency and deep burrowing in the lid margins, and for these reasons the infestation may exist for a long time before being recognized. Translucent white nits coating the eyelashes adhere to the hair shafts, and may be detected on the eyelid skin. Diagnosis can be made by close examination of the lashes and lid margins with slit lamp in order to identify the louse and nits.

Treatment of phthiriasis palpebrarum is difficult and varied. Maximal trimming of the eyelashes by removal of the lice and nits with fine forceps, cryotherapy and argon laser phototherapy all require the patient's cooperation, and general anesthesia or sedation may be necessary in young children. Cogan and Grant reported the use of anticholinesterase such as physostigmine ointment, but it does not affect the nits and has many side effects. Application of gamma benzene hexachloride or pyrethrins ointment is not recommended due to potential ocular irritation. Twenty percent fluorescein solution and petrolatum ointment have been reported to be effective. Four times daily application of 1% mercuric oxide eye ointment for 14 days and one application of malathion in an aqueous base have been shown to be safe and effective against lice and nits. Recently, two 200 μg/kg doses of oral ivermectin were given a week apart and eradicated the disease. In our case, we removed the eyelashes, including lice and nits, mechanically without sedation and obtained successful results. Because the hair-shaft habitat is essential for crab louse survival and reproduction, we think that mechanical removal of the eyelashes can eradicate the lice. Persistent pruritus and parasitophobia are common and difficult to treat even after infestation has been effectively controlled.

Pediculosis pubis is contracted chiefly by adults as a result of sexual intercourse, and not infrequently from bedding. Infants and children with phthiriasis palpebrarum are usually infested by direct passage of the lice from the axillary or chest hair of the parents or by other infected contact. Therefore, patients and their family members should be examined for infection in all hairy regions and for the existence of any other sexually transmitted diseases. All clothes, towels and linen should be thoroughly washed and heat dried. Proper hygiene is important to prevent spread of the epidemic.

REFERENCES