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Case Report
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Phthiriasis Palpebrarum Treated by Mechanical Removal of the Lice and Nits from the Eyelashes and Cutting the Scalp Hair : A Case Report

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SUMMARY

Purpose : To report a case of phthiriasis palpebrarum in a 5-year-old boy that was treated by mechanical removal of the crab lice and nits from the eyelashes, washing the scalp hair with phenothrin shampoo, and cutting the patient's long hair.

Case : A 5-year-old boy who had erythema and itching in his eyes for several months was presented at Dokkyo Medical University Koshigaya Hospital. The patient had been prescribed 0.1% fluorometholone and 0.5% levofloxacin for allergic blepharoconjunctivitis at another pediatric clinic. Slit-lamp examination revealed lice and nits anchored to the eyelashes. Additionally, more than 100 lice and nits were found in the patient's long scalp hair. The lice and nits were removed from the eyelashes by pulling them with a fine forceps without sedation during three monthly sessions. Furthermore, patient's parents washed the scalp hair with phenothrin shampoo, and cut it short. The patient completely recovered after 3 months without any further management, and there was no evidence of the lice or nits thereafter.

Conclusion : Phthiriasis palpebrarum can be diagnosed by close examination of the eyelashes. Treatment with mechanical removal of the lice and nits from the eyelashes, cutting the long scalp hair, and application of phenothrin shampoo may be effective in treating phthiriasis palpebrarum.

Key Words : phthiriasis palpebrarum, eyelashes, scalp hair

INTRODUCTION

Phthirus pubis (also called crab louse) has three sets of legs attached to the anterior part of the abdomen. The middle and hind sets are wider, with stout claws and opposing tibial thumbs on each leg resembling crab claws. *P. pubis* dies quickly when separated

from its host. *P. pubis* is usually 2mm or less, has a broad oval abdomen¹⁾. *P. pubis* is usually transmitted between adults by close physical (sexual) contact, and the phthiriasis palpebrarum is considered a sexually transmitted disease (STD). Infestation of eyelashes with *P. pubis* usually occurs through hands after contact with the infested genital area or by sexual contact²⁾. *P. pubis* infestation in children has been reported, and the transmission might occur by contact with carrier adult, or by infested bed linen or clothing^{3,4)}. Excessive prejudice should be avoided.

In addition to the presence of the lice and nits on the eyelashes, the signs of phthiriasis palpebrarum include color changes in the eyelids and louse excre-

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**Fig. 1**

Slit-lamp image of adult lice and nits anchored to the patient's eyelashes.

**Fig. 2**

Slit-lamp image 3 months after the initial visit.

tions over the eyelashes, which are similar to the signs of allergic blepharoconjunctivitis. Therefore, this disease can be misdiagnosed as common blepharitis⁵⁾. Other ocular signs and symptoms of the disease include itchy eye and gritty sensation, blepharitis, follicular conjunctivitis, and marginal keratitis⁶⁾.

Here we report a case of phthiriasis palpebrarum accompanied by infestation of the lice and nits on the scalp hair that was successfully treated by mechanical removal of the lice and nits from the eyelashes, washing the scalp hair with phenothrin shampoo, and cutting the scalp hair.

CASE REPORT

A 5-year-old boy was referred to our hospital with a history of longstanding erythema and itching of both eyelids. Although the patient had been diagnosed with allergic blepharitis and had been treated with 0.1 % fluorometholone and 0.5% levofloxacin at another pediatric clinic, these treatment had been ineffective.

The patient lacked signs and symptoms of specific systemic diseases. Patient's best-corrected visual acuity (BCVA ; decimal acuity measured using a Landolt ring) was 1.2 in both eyes. Slit-lamp examination revealed nits anchored to the eyelashes (Fig.1). Moving lice were observed on the eyelashes and in the scalp hair. The lice and nits were mechanically removed from the eyelashes without sedation using a fine forceps. The parasites were checked under a microscope as crab lice.

Pediculus corporis (head louse) and *Pediculus capi-*

tis (body louse) can be easily distinguished from *P. pubis* by their larger size (2 to 4 mm), elongated and their long slender legs. The parents stated having had no previous infestations and no history of STDs. The patient's father underwent a medical examination in the urological clinic, and no *P. pubis* infestation was noted. However, the patient's mother did not undergo a medical examination in the gynecological clinic in spite of our advice. The parents were advised to wash all clothing, towels and bed sheets of the boy and to cut his long scalp hair.

At the 1-month follow-up, the patient still had several lice and nits on the eyelashes and short scalp hair. The lice and nits were mechanically removed again without sedation using a fine forceps, and the parents stated that the patient had already been prescribed phenothrin shampoo from a dermatology clinic. The parents were advised to use the shampoo every day. The patient's BCVA remained 1.2 in both eyes.

At the 2-month follow-up, a few lice and nits were found on the eyelashes but none on the scalp hair. All the lice and nits were made sure to remove again using a fine forceps. At the 3-month follow-up, all the lice and nits had disappeared from the eyelashes and scalp hair (Fig.2). The patient was completely cured without any recurrence thereafter.

DISCUSSION

Phthiriasis palpebrarum occasionally accompanies other STDs⁷⁾ such as HIV, syphilis, gonorrhea, chla-

mydial infection, herpes, warts, and trichomoniasis and it is important to identify the source of infection. A retrospective study of 62 adolescents with pubic lice showed that they were twice as likely as uninfested adolescents to have chlamydial and gonorrhoeal infections⁸⁾.

To identify the original cause was attempted ; however, the parents denied any possibilities of STDs. Although father underwent medical examination, mother refused to undergo. Therefore, the infectious source could not be detected in the present case. Neri et al.⁹⁾ and Dohvoma et al.¹⁰⁾ have reported similar situations and the infectious original source could not be detected. Affected children should be reported to the appropriate authority to rule out sexual abuse¹¹⁾. Ikeda et al. also reported difficulties identifying the source of contamination in a child¹²⁾. However, detection of the original cause is necessary for prevention of reinfestation.

Although lice are occasionally difficult to detect due to their semitransparency and deep burrowing in the lid margin¹³⁾, the parasites were detected easily because of their abundance in the eyelashes of the patient. However, removal of the lice and nits from the eyelashes and scalp hair was difficult because of the lack of cooperation from the patient. Home lid scrubs from the parents should have been tried in the present case.

Effective management of phthiriasis palpebrarum requires thorough investigation and treatment as well as delousing of patients, contacts, other family members, clothing, and bedding. Reinfestation can be prevented by sterilizing the clothing, linen, brushes, and combs at a temperature of 50C for 30 min¹⁾. The parents of our patient were advised to follow these instructions to prevent reinfestations. The parents seemed to have followed our advice, because the patient did not return. The patient had been followed for 3 months only. Considering reinfestation, it is difficult to decide the follow-up period.

P. pubis infestation of the eyelashes is occasionally misdiagnosed as allergic blepharoconjunctivitis. Mechanical removal and lid scrubs of the lice and nits coupled with scalp hair treatment are a simple, cheap, safe, and effective treatment.

Informed consent

A written informed consent was obtained from the patient's mother for the publication of this case report and any accompanying images.

Disclosure

None of the authors report any conflict of interest in this work ; the study did not receive any significant financial or material support that could influence its results.

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