

Generalized Infestation of a 3½-Year-Old Girl With the Pubic Louse

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Abstract: A 3½-year-old girl had a *Pthirus pubis* infestation of the scalp, neck, eyelashes, back, and pubic area. The child's body, including the scalp, was treated with a 1% permethrin cream rinse formulation for 10 minutes. The treatment was repeated after 10 days. The eyelashes were treated by application of the permethrin solution with a cotton-tip swab.

The pubic louse *Pthirus pubis* is a human-specific ectoparasite. It is spread by close physical contact, usually during sexual intercourse, and less frequently among individuals, including children, sharing beds.

In adults the pubic, perianal, and axillary areas are commonly affected; however, these lice have been known to spread to the perineum, thighs, and occasionally the lower legs and trunk, especially around the umbilicus. In men, the areas surrounding the nipples, upper arms, and sometimes wrists are affected. In very heavy infestations in men the beard and moustache area may also be involved (1).

The eyelashes may become involved by manual transmission of lice from the genital area. However, in adults it is unusual to find the eyelashes infested in the absence of genital involvement. In children phthiriasis is usually contracted from an infested parent. Contaminated clothing, bedding, and toilets also may play a role in the transmission of *P. pubis* (2). The eyelashes and eyebrows are the preferred sites of infestation. Involvement of the scalp is rare, and then only the marginal areas are affected (3).

Individual lesions produced by pubic lice are usually not discernible, however, slate-gray or bluish gray maculae (maculae ceruleae) may occur. Pruritus and the presence of lice as small, 1- to 2-mm, brownish gray spots in the involved areas are additional indications of infestation. Eyelid infestation is often heavy and gives the impression of marked yellowish encrustation that, when severe, is often accompanied by edema of the lids.

The presence of pubic lice on the scalp, eyelashes, and eyebrows of young children is well known (1,2,4,5), but infestation of the pubic area and hair of the trunk seems to be very rare.

We describe the case of a 3½-year-old girl with a generalized infestation with *P. pubis*.

CASE REPORT

A 3½-year-old girl was seen with generalized pruritus from which she had been suffering for more than one month. Physical examination revealed the presence of *P. pubis* and eggs attached to the hairs of the neck, back (Fig. 1), pubic area (Fig. 2), eye-

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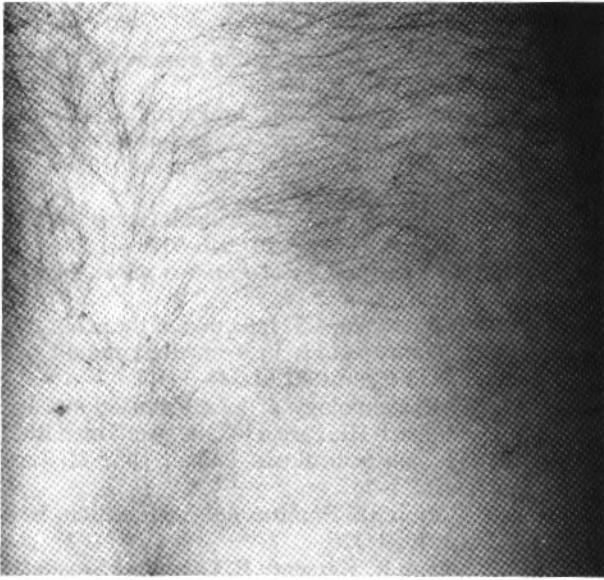


Figure 1. Pubic lice and eggs on the patient's back.



Figure 2. Pubic lice and eggs on the pubic area.

lashes, and scalp. Excoriations due to scratching were visible in the neck and pubic area. Otherwise the child appeared to be healthy. No other cutaneous lesions were seen, and there was no history of allergic disease. Pubic lice were previously identified on the 25-year-old brother of the child's father, who three to four months earlier had slept for a few days in the child's bedroom. Approximately four weeks later both parents of the child were treated for phthiriasis.

The child did not report any sexual abuse, and no signs of such abuse were seen on physical examination of the vulva and anus.

The child's body, including the scalp, was treated with a 1% permethrin cream rinse (Zehu Ze) for 10 minutes and repeated 10 days later. The eyelashes were treated by application of the permethrin solution with a cotton-tip swab. Ten minutes later the eyelashes were rinsed with water also applied by a swab. After two weeks no viable lice and eggs were seen on the girl's body. No side effects of therapy were observed.

DISCUSSION

Increased promiscuity is usually blamed for the increasing frequency of pubic lice infestation (6). Fisher and Morton (7) found that the sex ratio and marital status of people affected with phthiriasis are similar to those with gonorrhea.

In Israel the prevalence of phthiriasis has been investigated only in the army. It was found that the rate of infestation increased from 7 cases per 1000 in 1977 to 14.9 per 1000 in 1983. Since then, a continuous downward trend has occurred, with the lowest rate being 4.6 per 1000 in 1987. In general, morbidity was higher in the winter months. Analysis of reports of *P. pubis* infestation in 1986 and 1987 showed that nearly all cases were restricted to men (96.4%) (8). During September–December 1987, 13 children in the vicinity of Tel Aviv suffering from phthiriasis with involvement of the eyelashes were treated with 1% yellow oxide of mercury (9).

When phthiriasis is suspected, a thorough examination of the whole body including axillae, eyelashes, eyebrows, and scalp, for the presence of pubic lice is necessary. All infested areas should be treated.

Other family members and sexual contacts should be examined and treated if necessary. Contaminated clothing and bedding must be deloused. Because phthiriasis is usually spread by venereal contact, once the diagnosis is made, it is necessary to examine the patient for coexistent venereal diseases such as syphilis and gonorrhea (2).

Hexachlorocyclohexane (Lindane 1%), malathion 0.5% to 1%, and carbaryl 0.5% to 1% are used to treat phthiriasis. A second application 7 to 10 days after the first is recommended (1).

Permethrin 1%, a synthetic pyrethroid in cream rinse formulations, is used today throughout the world for treatment of pediculosis capitis. This pediculicide has residual activity, and therefore a single 10-minute treatment of the scalp followed by

thorough rinsing of the hair is enough to kill all lice existing on the hair as well as those that hatch from attached eggs (10).

Permethrin is one of the more extensively studied pediculicides with regard to safety and efficacy. Based on oral lethal dose of 50% of organisms on rats, it is less toxic than malathion, carbaryl, and Lindane (11). Permethrin 5% cream has been approved by the U.S. Food and Drug Administration for the treatment of scabies (12).

During five years of clinical trials that tested the efficacy of 1% permethrin for head lice, topical products were found to be remarkably free of irritant or allergic effects (13). The authors also treated 756 persons with scabies using 5% permethrin, and in no instances did they encounter any adverse reaction, allergic dermatitis, or primary irritancy. However, in patients with phthiriasis treated with 1% permethrin, a second treatment after 10 days was necessary to eliminate the lice completely (14).

Although treatment of the pubic region and other hairy parts of the body is relatively easy, treatment of the eyelashes is problematic. For example, natural pyrethrin formulations have caused irritation of the cornea (15). Mechanical removal of lice using sharply pointed forceps can be dangerous, especially in children. Yellow mercuric oxide ophthalmic ointment 1% to 2%, petrolatum, or physostigmine ointment 0.25% to 1% two to three times a day for 7 to 10 days has been recommended (2).

We suggest 1% permethrin for the treatment of phthiriasis, with a second application after 10 days. This agent can also be used for phthiriasis palpebrarum. The application should be carried out by a physician using cotton-tip swabs soaked in the pediculicide and applied to the infested eyelashes. A second treatment is necessary only if viable lice or eggs are found 10 days following the first treatment.

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