

REVIEW

Pthiriasis of the eyelashes

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ABSTRACT

Pthirus pubis, popularly known as crab louse, usually infests the pubis, groin, buttocks, intergluteal fold and perianal region. However, it can also infest, in particular in hairy males or when the infestation is longstanding, the thighs, abdomen, chest, axillae and face. The involvement of the scalp is very rare. Eyelashes may also be involved. We present a review of the literature about etiology, epidemiology, clinical features, complications and therapy of Pthiriasis of the eyelashes.

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KEY WORDS: Eyelashes; Pthirus; Child.

Pthirus pubis Linnaeus, 1758 (Diptera: Anoplura) was named in the past *Pediculus pubis*, *Pthirus inguinalis*, *Pediculus ferus*, *Pthirus chavesi*, *Pthirus inguinalis* and *Pthirus pubis*. It is popularly known as crab or pubic louse. It usually infests the pubis, groin, buttocks, intergluteal fold and perianal region. However, it can also infest, in particular in hairy males or when the infestation is longstanding, the thighs, abdomen, chest, axillae and face. The involvement of the scalp is very rare.¹ Eyelashes may also be involved.²⁻⁴

Etiology

The female lays 3 to 10 eggs/day. Each female may lay 50 to 300 eggs over the lifetime. These eggs are similar, although smaller, to eggs of *Pediculus humanus capitis*. The eggs hatch within 7 to 10 days. The first instar nymphs feed for about 5 to 7 days before molting. The second instar is completed within 7 to 10 days and the third instar takes about 12 to 20 days. Third instar nymphs are morphologically similar to adults. Neither larvae nor adults can survive more than one day without feeding. Mature

adults live for 3 to 6 weeks. They die within 1 to 3 days when they are far from their host.

While feeding, crab louse grabs human hairs with its second or third legs. The louse inserts its mouth parts into the skin of the host, and takes blood intermittently for some hours.^{22, 57} *Pthirus pubis* infests exclusively humans and does not transmit infectious diseases.

Epidemiology

Pthiriasis of the eyelashes, also named Pthiriasis palpebrarum and, in the past, pediculosis ciliarum,² Pthiriasis ciliaris,⁴ pediculosis ciliaris,¹² Pthiriasis palpebrum³⁰ and pthiriasis palpebrarum,^{15, 40} is more common in children, although it is possible to observe it also in adults.^{10, 13, 25, 26, 31, 35, 39, 42, 46, 49, 52, 53, 55, 56, 58, 59, 62, 65, 67, 72} This Pthiriasis is acquired by close contacts with infested individuals or contaminated clothing, towels and bedding.⁶¹ It is also considered as a sexually transmitted disease.^{27, 36, 40, 52, 61} In some cases, Pthiriasis of the eyelashes is a manifestation of child abuse.^{19, 36, 38, 57, 66}

Epidemiology of Pthiriasis of the eyelashes is poorly known. This is mainly due to the fact that, in several countries, such as Italy, notification of this infestation is not required by law. Therefore, we do not know the reasons for which some children and adults develop Pthiriasis of the eyelashes (chronic and/or extensive infestation?).

Clinical features

Pthiriasis of the eyelashes usually occurs in both eyelids, although some cases with involvement of just one eye have been reported.^{41, 47, 58, 62, 66, 68, 73, 74} Eyebrows are rarely involved.⁴² The most frequent clinical presentation is the finding of more or less numerous nits. They are oval or pear-like in shape, 0.5-1 x 0.3 mm long. When they are vital, they appear as greyish and matt eggs, firmly stuck to the eyelashes. The color is whitish when the eggs are empty. The finding of adults is rare. This Pthiriasis is characterized by erythema,^{10, 53, 57, 61} scaling,²² crusts^{22, 52, 53, 56, 62} and lachrymation.⁵⁸ A case of cystic-like lesion, presumably due to the chronic application of eyeliner, eye shadows and kajals has been recently reported.⁷⁴ Pruritus is the most frequent symptom.^{6, 12, 20, 22, 29, 34, 38, 41, 42, 45, 46, 50, 52, 53, 56, 58, 61, 62, 66, 67, 71} Rare symptoms are burning,^{66, 67} pain^{10, 67} and fever.²⁹

Complications

A common complication is blepharoconjunctivitis.^{6, 10, 12, 13, 21, 28, 39, 42, 44, 48, 52, 53, 59, 61, 62, 68, 71} Some cases of keratitis have also been reported.^{10, 40, 61} Bacterial superinfections,^{6, 22, 61} with preauricular lymphadenopathy¹² are very rare.



Figure 1.—Pthiriasis of the eyelashes.

Diagnosis

The diagnosis of Pthiriasis of the eyelashes is usually easy. The presence of nits confirms the diagnosis. As previously mentioned, the finding of adults is rare. However, microscopical examination of adults, when present, is important because both *Pediculus humanus capitis* and *Pediculus humanus corporis* can, although very rarely, affect the eyelashes.^{12, 22, 57} *Phthirus pubis* has a stocky, discoid body, 2-3 mm long, with translucent-brown carapace. *Pediculus humanus capitis* and *Pediculus humanus corporis* are very similar: they have an ovoid shape, are 3-4 mm long, tan to pale grey in colour. Other diseases that should be considered in differential diagnosis are irritant and allergic contact dermatitis,^{46, 73} seborrhoeic dermatitis⁶³ and *Demodex folliculorum* blepharitis.⁶ In the last few years, dermoscopy showed to be helpful for the diagnosis (Figure 1).^{54, 60, 65}

Therapy

Topical therapy

Numerous therapies have been proposed. In the past, cryotherapy¹¹ and argon laser²³ have been used. However: a) the gentle mechanical removal of lice and nits, in spite of the firm adhesion of the nits to eyelashes,^{2, 10, 16, 33, 34, 38, 41, 47, 55, 56, 61, 68, 73} b) the application of petrolatum^{22, 24, 38, 41, 51, 61, 62, 68, 74} or c) the application of 0.1-1% yellow oxide of mercury, 2-4 times daily for 1-2 weeks,^{4, 16, 22, 25, 38} can be considered as the most effective and safest treatments. Also the cutting of the lashes at the base may be taken into consideration.^{28, 33, 34, 66, 67} Other possible treatments include 20% sulphacetamide ointment,¹⁰ 10-20% fluorescein drops (however, they can leave a temporary orange-green stain on the skin of the eyelids),^{15, 22} 0.25% physostigmine,^{16, 22} 1% lindane,¹⁷ 0.5-1% drops,²⁶ lotion⁴¹ or shampoo²⁶ of malathion, 1-2.5% permethrin (also as shampoo),^{29, 61, 62} 4% pilocarpin gel or drops^{32, 44, 46} and moxifloxacin ointment.⁵⁸ Tea tree oil⁵¹ and even kerosene²⁰ have been also used.

In patients with involvement of thighs, abdomen, chest and axillae, a treatment with a foam containing pyrethrins and piperonyl butoxide (1 application/day for two consecutive days) is usually effective.

Oral therapy

To our knowledge, ivermectin is the only oral drug used so far.^{30, 52, 61} In addition, pillows, bed linen, towels and hats must be thoroughly rinsed in hot water.⁶¹

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