

Case Series Report

Phthiriasis Palpebrarum Presenting as Anterior Blepharitis

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Summary

In humans, *Pthirus pubis* or crab louse usually infests hair of pubic region. Phthiriasis palpebrarum (infestation of the eyelashes and eyelids) is not as rare as is reported in literature, especially in low socioeconomic communities. It is possible that the disease is being perhaps missed due to its clinical similarity with anterior blepharitis. The nits and adult lice adhering to the eyelashes can easily be overlooked. This study presents five cases of phthiriasis palpebrarum, coming from the same locality and socioeconomic background, presenting with itching, hyperemia of lids, and excoriation of skin. Two patients were misdiagnosed elsewhere. All were successfully treated. The presence of *P. pubis* reflects the low level of health and hygiene of that stratum of the society. Higher prevalence could be related to rapid urbanization, overcrowding, and extreme poverty. The health-care providers and policymakers should give more merit to this not so uncommon disease having high morbidity.

Key words: Anterior blepharitis, phthiriasis palpebrarum, *Pthirus pubis*

Pthirus pubis or crab louse usually infests pubic hair. However, it rarely involves the eyelashes and eyelids, a condition known as phthiriasis palpebrarum.^[1] Clinically, it presents as itching, erythema, discoloration of skin as dark brown or red spots, adult lice and nits appearing as white flakes, excoriation of eyelid skin, conjunctivitis, and rarely keratitis.^[2] These symptoms can be overlooked by clinicians and easily misdiagnosed as anterior blepharitis, being perhaps the reason for less reported cases.^[3,4]

Here, I report five cases of phthiriasis palpebrarum mimicking anterior blepharitis coming from the same locality of low socioeconomic background. They all presented at the start of summer months (March to April) this year in the Outpatient Department of Ophthalmology, Hamdard Institute of Medical Sciences and Research, New Delhi. While two cases were misdiagnosed elsewhere, rest three presented to us directly. The patients were treated successfully by mechanical removal of the lice, epilation of eyelashes where possible, application of azithromycin ointment and petroleum jelly topically three times daily for a period of 2 weeks.

Out of five cases, three were females and two males. Four belong to the sexually active age of 25–30 years; one was a 14-year-old boy. All of them were from the same lower socioeconomic strata of the society, the urban slum. Two of them were initially misdiagnosed, elsewhere, as anterior blepharitis. The

symptoms in these two cases persisted despite treatment. All presented with frequent itching and redness of eyelids. In four patients, the symptoms were bilateral, while one had unilateral, involving the right eye. On examination, eyelid margins and conjunctiva were hyperemic with exfoliation of skin and white flakes adhering to the eyelashes. Slit-lamp examination under high magnification (16×) revealed multiple adult lice adhering to the eyelashes with translucent oval nits attached to some of the cilia [Figures 1-3]. Visual acuity and anterior and posterior segments were normal. A diagnosis of phthiriasis palpebrarum was made after examining under the microscope confirming the presence of pubic louse [*P. pubis*, Figures 4 and 5]. The patients were treated by manually removing the adult lice and epilation of eyelashes where nits were seen adhering. Topical azithromycin and petroleum jelly were given for local application thrice a day for 2 weeks when the patients were free of infestation. In all cases, stress was given to good personal hygiene and cleaning and washing of all personal clothing.

Notably, infestation of pubic hair by crab louse was seen in only one case with unilateral involvement, who gave a history of intense itching in pubic area. His pubic hair was shaved.

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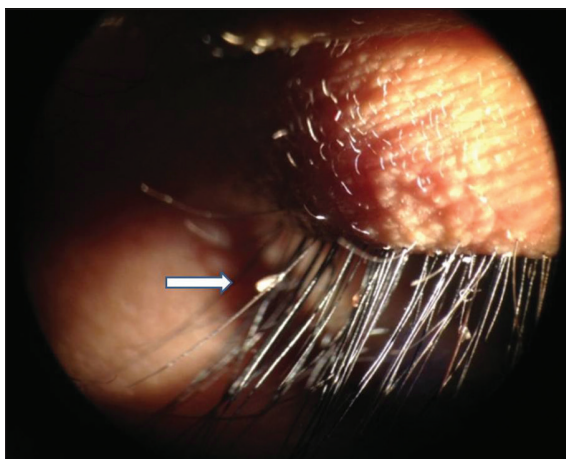


Figure 1: Brown translucent eggs (white arrow) of *Pthirus pubis* attached to the eyelashes seen under high magnification (16×) of slit lamp.

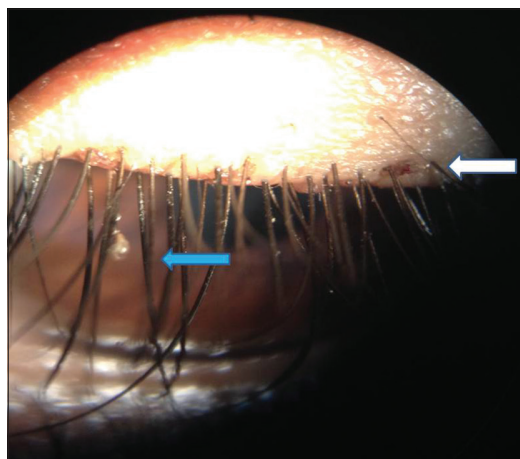


Figure 2: Brown translucent eggs (blue arrow) of *Pthirus pubis* attached to the eyelashes seen under high magnification (16×) of slit-lamp white arrow showing brown-colored feces deposited in the upper eyelid margin skin.

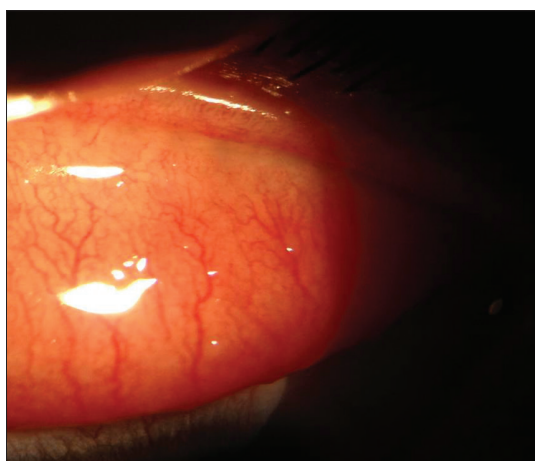


Figure 3: Upper palpebral conjunctiva showing follicular reaction and hyperemia.



Figure 4: Adult *Pthirus pubis* as seen under microscope (black arrows).

In all the cases, respective family members were examined to know the possible source. Spouse of one female patient had *P. pubis* infestation, who too was treated successfully by shaving all pubic hair.

Phthiriasis palpebrarum, caused by *P. pubis* or crab louse, is a rare condition as the latter can move only for short distances.^[5] In poor communities, ectoparasite infestation is quite common. Overcrowding, sharing of beds, urbanization, poor hygiene, lack of health-care facility, and social attitudes all facilitate in its prevalence.^[6] Further, it is reported that sexual contact with louse-infested individual, contaminated hands, or infected clothing all play an important role in manifestation of phthiriasis palpebrarum, as noted in the present study.^[7]

Phthiriasis palpebrarum can easily be confused with seborrheic, infective, or allergic blepharitis. The mode of infestation and its presentation by *P. pubis*, around the roots, burrowing under the skin; itching, irritation, erythematous lesions of eyelid skin, follicular conjunctivitis, and marginal keratitis are similar to anterior blepharitis, hence resulting in misdiagnosis,^[5] as also

seen in two of the cases reported here. Interestingly, a simple use of slit-lamp biomicroscopy under high magnification helps in identifying adult lice and nits adhering to the eyelashes avoiding a misdiagnosis.

Parasitological examination helps in confirming the diagnosis. As can be seen in Figures 4 and 5, *P. pubis* appears as a broad, flattened body of about 2 mm under microscope. The adult louse has three pairs of legs attached to the abdomen. The most anterior pair of leg is slender, with fine claws and a serrated surface. Posterior pairs are thick for an improved grasp of hair shafts and attachment of eggs. The eggs can be seen with naked eye as translucent oval, 0.5 mm in size attached to the hair shaft. As the eggs are semi-transparent in nature, they can be easily missed and confused with blepharitis. The average lifespan of *P. pubis* is about 4 weeks. On removal from the host, its death can occur within 48 h.^[8]

Management of Phthiriasis palpebrarum is challenging. Mechanical removal of lice and nits from eyelashes



Figure 5: Egg of *Pthirus pubis* attached to the cilia as seen through the microscope (white arrow).

is the most favored, although it is a time-consuming treatment.^[8] Alternatively, infested eyelashes may be epilated. Application of white petrolatum is also effective in killing of the adult lice.^[5] Other treatment modalities include mercuric oxide 1%, but it may cause chemical blepharitis. Pilocarpine 4% gel and oral ivermectin have also been tried.^[9] In our case, mechanical removal and epilation of eyelashes along with the application of antibiotic ointment and petroleum jelly were effectively used as treatment. It is also important to examine the axilla and pubic region for any infestation and to completely treat the disease, besides it helps in knowing the hygienic status of the patient for patient education.

Phthiriasis palpebrarum is a disease with high morbidity. It is important to note that *P. pubis* is also a vector of a number of pathogenic bacteria causing secondary life-threatening infections. Repeated scratching can cause excoriation of the skin creating portals of entry for pathogenic bacteria.^[10]

Although considered as rare, the likelihood of phthiriasis palpebrarum and associated morbidity as a public health problem remains high, as reported in this study, five cases within 2 months. Rapid urbanization, overcrowding, and poverty are contributing factors. The presence of *P. pubis* reflects the low level of health and hygiene of that stratum of

the society. It is recommended that the health-care providers and policymakers may give more merit to this disease having high morbidity.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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