

Blepharoconjunctivitis Resistant to Routine Blepharitis Therapy: A Case with Phthiriasis Palpebrarum

Rutin Blefarit Tedavisine Dirençli Blefarokonjunktivit: Pitriazis Palpebrarumlu Bir Olgu

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ABSTRACT A case with phthiriasis palpebrarum upon eyelids was reported in this article. A four-year-old girl with itching and irritation of both eyes for three months had been admitted, and hyperemia, crusty lid margins with grayish discoloration at the basement were noted in the ocular examination. Numerous nits and lice confirmed as pubic lice by microscopic evaluation were detected on the eyelashes by slit-lamp examination. Treatment with 1% permethrin shampoo and pure vaseline were initiated but due to its irritation she could not use the shampoo. Diluted 50% vinegar solution was added to the treatment as to be used for two weeks. No severe ocular side effects occurred during the treatment. Instead of 1% permethrin shampoo which is difficult to apply upon the children, using 50% diluted vinegar may be an alternative method for the treatment of phthiriasis palpebrarum owing to its keratolytic effect.

Key Words: Blepharitis; conjunctivitis

ÖZET Bu çalışmada phthiriasis palpebrarum'lu bir vaka bildirilmiştir. Dört yaşında kız çocuğu üç aydır her iki gözünde var olan kaşıntı ve batma hissi şikayetleriyle kabul edildi. Göz muayenesinde hiperemi ve kapak kenarlarında gri renk bozukluğunun eşlik ettiği kabuklanma tespit edildi. Biyomikroskop ile yapılan değerlendirmede, kirpiklerde birkaç adet sirke ve bit görüldü. Mikroskopik değerlendirme ile bunların kasık biti olduğu tespit edildi. Hastaya saf vazelin ve %1'lik permetrin şampuanı başlandı, fakat iritasyon nedeniyle şampuanı kullanamadı. Tedaviye %50'lik seyreltilmiş sirke eklendi ve iki hafta kullanıldı. Tedavi süresince yan etki görülmedi. Çocuklarda uygulanması sıkıntılı olan %1'lik permetrin'in yerine %50 seyreltilmiş sirke kullanımı, keratolitik etkisi nedeniyle phthiriasis palpebrarum'un tedavisinde diğer tedavi metodlarına alternatif oluşturabilir.

Anahtar Kelimeler: Blefarit; konjunktivit

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Phthiriasis palpebrarum is an uncommon cause of blepharitis and conjunctivitis and it may easily be neglected in the diagnosis. A high index of suspicion and careful examination of the patient's lid margins and eyelashes will lead to the proper diagnosis. It is generally caused by Phthirus pubis (pubic lice). Phthirus are 2mm long and have a broad-shaped, crab-like body. Their thick, clawed legs make them less mobile than the Pediculus species, however enable them to infest areas where the adjacent hair is within their grasp (eyelashes, beard, chest, axillary region, pubic region).¹ They rarely infest the scalp.

Treatment of Phthiriasis palpebrarum is difficult especially in children because of severe irritation of the treatment methods on the eye. Using 50% diluted vinegar with pure vaseline may be an alternative for the treatment because of its keratolytic effect.

We present a case of Phthiriasis palpebrarum treated with 1% permethrin shampoo, pure vaseline and 50% diluted vinegar.

CASE REPORT

A four-year-old girl was presented to Baskent University School of Medicine, Department of Ophthalmology with complaints of itching and irritation of both eyes that were present for three months. She had been treated with topical antibiotics and topical steroids with diagnosis of blepharconjunctivitis for three months. She was healthy and had no ocular disease until those symptoms had appeared. Hyperemia, crusty lid margins with grayish discoloration at the basement were noted in the ocular examination and the cornea was intact. Numerous nits and lice were noticed in on the eyelashes slit-lamp examination, however, no nits and lice were found on the scalp hair (Figure 1,2). Subsequently, lice were confirmed as pubic lice in microscopic examination. Her parents denied that there could be a sexual contact or venereal disease in her history, moreover they refused any further examination for lice infestation.

Permethrin 1% shampoo to be applied to the lid margins and washed off short after was prescribed. The patient could not use it due to its severe irritation, and pure vaseline ointment was given for treatment. Patient used vaseline three times a day, for five years. Detailed information to wash all clothes and beddings and to use hot cycle and to iron them was explained to her parents. Although there was a significant improvement in her symptoms, a few lice were still seen on fifth day of treatment. With the consultation to department of dermatology, 50% diluted vinegar was added to the treatment protocol as the lid margins were brushed with it by cotton buds twice a day before the vaseline application, for seven days. At the end of the se-

cond week of treatment, not only the side effects of infestation on the cornea and conjunctiva, but also the nits and lice were not seen on the eyelashes (Figure 3). Pure vaseline and 50% diluted vinegar treatment were applied easily by her parents without any side effects.

DISCUSSION

Phthiriasis palpebrarum, is caused by the cosmopolitan crab called *Phthirus pubis*. This wingless, blood-sucking insect not only infests eyelashes and pubic regions, but also occasionally inhabits the hair of the face, chest, axilla, and rectal regions. Unlike the head louse, the pubic crab has a serrated surface on its first tarsal claws, allowing this organism tract on flat hairless surfaces.¹ These lice can move in dark and migrate from one hairy area to another. Crowded populations and poor personal hygiene may cause the infestation. Infants and children with phthiriasis palpebrarum are usually infested by direct passage of the lice from the axillary or chest hair of the parent or other infested contacts.

Ocular complaints and findings include the following: bilateral ocular itching, irritation, secondary blepharitis, follicular conjunctivitis, marginal keratitis, and visible lice and nits on the eyelashes. Several treatments have been reported, including anticholinesterase agents, epilation,² gamma benzene hexachloride (lindane),³ cryotherapy,⁴ manual removal of the lice,⁵ ivermectin,⁶ argon laser, yellow mercuric oxide,^{5,7} malathion,^{3,8} and cutting the lashes at the base.⁹

The most popular ocular treatment is to remove the parasites with forceps under the slit-lamp. In co-operative patients it could be possible, however, this procedure sometimes needs to be executed the general anaesthesia or sedation as so in the young patients.^{2,10}

An application of gamma benzene hexachloride carefully to remove the nit is usually adequate to eradicate the lice, however it has some disadvantages including the a potential for ocular irritation and epithelial toxicity. Due to cited possible toxicity upon the central nervous system, this agent should be used carefully in infants, children, and pregnant women.³



FIGURE 1: Eyelash infestation with phthirus pubis. Nits and a louse are seen attached to the eyelashes.

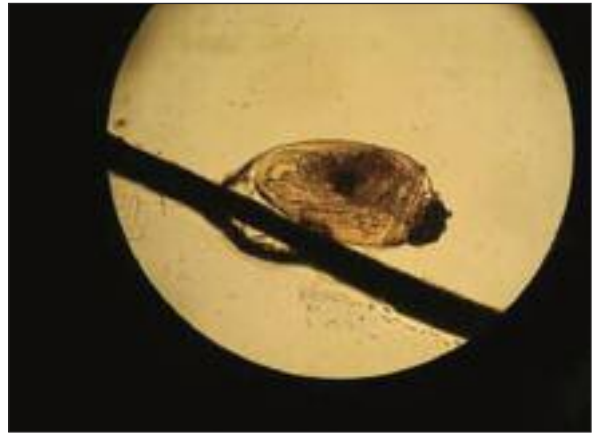


FIGURE 2: A nit attached to the eyelash (x10 magnification)

Anticholinesterases as effective as 1% yellow mercuric oxide, but when applied in the standard concentrations as in the treatment of glaucoma, undesired ocular symptoms may be seen. Another disadvantage is ineffectiveness against the nits.¹¹

Cryotherapy and argon laser phototherapy have been cited to be used recently in the management of phthiriasis palpebrarum.^{4,12} However, these treatments may be very uncomfortable and thus potentially dangerous for the young uncooperative patient. They are not generally accepted as a primary choice of treatment.

In our case, although we started therapy with 1% permethrin shampoo the patient could not use it because of its severe irritation on the eye.

Pure vaseline is a non-wettable substance that is thought to clog the breathing spiracles, causing the lice to die of suffocation and desiccation. It can be easily applied to the eyelashes since it has no adverse effects on the eye. Vandeweghe and Zeyen used vaseline with malathion 5% solution in two patients with phthiriasis palpebrarum, and Charfi et al. used pure vaseline in phthiriasis palpebrarum.^{13,14} We also applied vaseline to the eyelashes three times a day for five days without any side effects. Following the fifth day of treatment, we still observed a few lice and added 50% diluted vinegar twice a day for seven days to the treatment protocol. Although it has a mild irritative effect on the eye, we did not observe any undesirable effects on

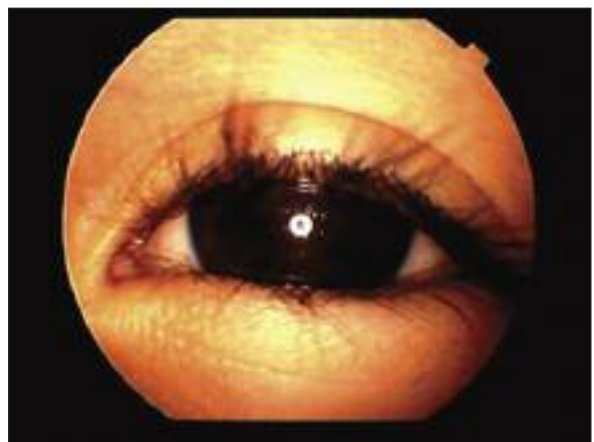


FIGURE 3: A photograph of the patient after treatment. All nits and louse were eradicated.

the cornea or conjunctiva. Vinegar easily separated the attached nits from the hair shafts owing to its keratolytic effect. To the best of our knowledge, this is the first case reporting use of vinegar for the treatment of Phthiriasis palpebrarum in the literature.

In conclusion, Phthiriasis palpebrarum should be considered in the differential diagnosis of blepharoconjunctivitis especially in the young age group. The 50% diluted vinegar with pure vaseline may be an alternative to permethrin shampoo which is difficult to apply in children due to severe irritation on the eye. Family members, sexual contacts, and close companions should be examined and treated appropriately; clothing, linen and personal items should be disinfected at high temperature.

REFERENCES

1. Ubelaker JE, Payne E, Allison VF, Moore DV. Scanning electron microscopy of the human pubic louse, *Pthirus pubis* (Linnaeus, 1758). *J Parasitol* 1973;59(5):913-9.
2. Duke-Elder S, MacFaul PA. Pediculosis. In: Duke-Elder S, ed. *System of Ophthalmology*. Vol III. 1st ed. London: Henry Kimpton; 1974. p.195-8.
3. Gurevitch AW. Scabies and lice. *Pediatr Clin North Am* 1985;32(4):987-1018.
4. Awan KJ. Cryotherapy in phthiriasis palpebrarum. *Am J Ophthalmol* 1977;83(6):906-7.
5. Yoon KC, Park HY, Seo MS, Park YG. Mechanical treatment of phthiriasis palpebrarum. *Korean J Ophthalmol* 2003;17(1):71-3.
6. Burkhart CN, Burkhart CG. Oral ivermectin therapy for phthiriasis palpebrum. *Arch Ophthalmol* 2000;118(1):134-5.
7. Aslan OŞ, Ocakoğlu Ö, Üstündağ C, Devranoğlu K, Kendiroğlu G. [Yellow mercuric oxide the treatment in phthiriasis palpebrarum]. *Türkiye Klinikleri J Ophthalmol* 1994;3(3):205-7.
8. Rundle PA, Hughes DS. Phthirus pubis infestation of the eyelids. *Br J Ophthalmol* 1993;77(12):815-6.
9. Mansour AM. Photo essay: phthiriasis palpebrarum. *Arch Ophthalmol* 2000;118(10):1458-9.
10. Goldman L. Phthirus pubis infestation of the scalp and cilia in young children. *Arch Dermatol* 1948;57(2):274-6.
11. Cogan DG, Grant WM. Treatment of pediculosis ciliaris with anticholinesterase agents; report of a case. *Arch Ophthalmol* 1949;41(5):627.
12. Awan KJ. Argon laser phototherapy of phthiriasis palpebrarum. *Ophthalmic Surg* 1986;17(12):813-4.
13. Vandeweghe K, Zeyen P. Phthiriasis palpebrarum: 2 case reports. *Bull Soc Belge Ophthalmol* 2006;(300):27-33.
14. Charfi F, Ben Zina Z, Maazoun M, Kharrat W, Sellami D, Makni F, et al. [Phthiriasis pubis palpebrarum in children. Diagnosis and treatment]. *J Fr Ophtalmol* 2005;28(7):765-8.