Case report

Ciliary phthiriasis: Dermoscopic diagnosis

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Abstract

Phthiriasis palpebrarum (lice infestation of eyelid) is a rarely reported disorder. It may present as blepharoconjunctivitis, and is therefore often neglected. We present a 36 year-old female who suffered itching and irritation at eyelids. A careful examination of the eyelids objectified blackish granules of cilia. Dermoscopic examination revealed the presence of nits attached to the eyelashes with tiny brownish punctuation found on the skin, which they could easily recognize as adult lice that were mobilized around the eyelids. She was successfully treated with oral ivermectin. After clinical and dermoscopical control, no more lice or nits were present in the patient. This report emphasizes the importance of the correct diagnosis and management of this disease, and the interest of dermoscopy in the diagnosis and treatment evaluation of phthiriasis palpebrarum.

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1. Introduction

Phthiriasis palpebrarum (lice infestation of eyelids), caused by the Phthirus pubis, is an unusual cause of blepharitis and conjunctivitis and may easily be overlooked because of the failure of physicians to recognize P. pubis (Lin et al., 2002). It is usually seen in lower socioeconomic groups and spreads through either sexual contacts or directly through linen or clothing (Niazi and Arain, 2009).

The diagnosis of human phthiriasis can be difficult because this insect has a smaller body, may be lighter in color, not as mobile and therefore harder to see to the naked eye. Can dermoscopy aid to perform a better analysis of the skin?

2. Case report

We report a case of a 37 year-old female, with no history of pathological notables, presented with gradual pruritus and painless ocular hyperaemia over the previous four months, which was unsuccessfully treated under the diagnosis of allergic blepharoconjunctivitis. A careful examination of the eyelids revealed blackish granules of cilia (Fig. 1) and as the patient reported particles that are mobilized in the eyelashes, it encouraged us to use dermoscopy which revealed the presence of nits attached to the eyelashes with tiny brownish punctuation found on the skin, which they could easily recognize as adult lice that were mobilized around the eyelids and bloody crusts and a semi-transpar-
ent deposit that were present in the superior palpebral margin (Fig. 2).

Based on the observation of numerous nits at the base of the eyelashes (Fig. 1) and the ectoparasite in the palpebral margin (Fig. 2a and b), a diagnosis of phthiriasis palpebrarum was made. Examination of other body areas showed no damage and the search of other sexually transmitted diseases was negative. A survey in the entourage was conducted objectifying similar cases in her two sons and her husband. Extraction with forceps was attempted, but it was revealed painful, therefore it was decided to prescribe oral ivermectin 12 mg as a single dose with treatment of the environment and bedding. Other recommendations to avoid re-infestation were made, such as changing, washing and sterilising clothes, towels and sheets daily. The clinical and dermoscopic evolution revealed no ectoparasites without recurrence.

3. Discussion

On the eyelashes, the lice infestation is called phthiriasis palpebrarum. The nits and their empty shells are attached to the base of the eyelashes.

*P. pubis* is a hematophagous parasite of humans (Slonka, 1977) and usually infests a new host only by close contact between individuals. Although *P. pubis* preferentially inhabits the pubic area, it can reach the armpits, eyebrows, eyelashes, and beard through hand contact from the genital area (Couch et al., 1982), contact with sheets and towels contaminated with louse eggs (Duke-Elder, 1974), or by using its serrated jaws to travel across the human body (Ubelaker et al., 1973). Sexual contact and parent–child interactions are more common routes of infestation than shared towels, sheets, or clothes.

The diagnosis of human phthiriasis can be difficult because this insect has a smaller body, may be lighter in color, is not as mobile and therefore harder to see with the naked eye. Can dermoscopy aid to perform a better analysis of the skin? The identification in vivo can distinguish *P. pubis* from other skin signs while the conical shape of the operculum and the wide fixing sleeve of egg to eyelashes, tells us what species of louse is infesting, even if the insect is unavailable or nits are elsewhere from the pubic area. Entodermoscopy, provided that dermatologists have some knowledge of entomology, therefore promises advantages over standard microscopic examination (Scanni, 2012).

Dermoscopy is a non invasive technique that gained popularity for the evaluation of pigmented skin lesions, particularly for the early detection of melanoma (Argenziano et al., 2003). Despite this main application, dermoscopy has also been described as an aid in the diagnosis in squamous diseases, depigmenting diseases, pseudofolliculitis barbae, infections and infestations (Lin et al., 2002). Dermoscopic patterns have already been described for viral warts, molluscum contagiosum and tinea nigra among other conditions namely human parasitoses and treatment follow-up of human parasitosis, such as scabies, tungiasis, and cutaneous larva migrans (Bauer et al., 2004). New generations of hand-held dermscopes using polarized light no longer require direct contact, which prevents the possible risk of transfection in the latter cases. The characteristic dermoscopic features let us not only establish a rapid diagnosis but were also useful for the treatment monitoring, because vital eggs were still present after the first treatment cycle. Therefore, in vivo dermoscopy may replace the more time consuming ex vivo microscopic examination of the affected eyelashes in the daily routine.
On dermoscopy, they appear oval and translucent and can be confused with the crusts of seborrhoeic blepharitis (Bauer et al., 2004). The lice lock into the root of the lashes using their thick claws. There are bluish skin lesions and brownish deposits related to feces (Bauer et al., 2004).

In addition to the clinical and epidemiological data, the identification of adult parasites or nits confirms the diagnosis; lice can be difficult to detect because they are semi-transparent and burrow deep into the lid margin. The patient often presents with palpebral pruritus, conjunctival inflammation. Secondary blepharitis, follicular conjunctivitis, and blepharocconjunctivitis may be observed (Couch et al., 1982; Ashkenazi et al., 1991). Several treatments for phthiriasis palpebrarum have been reported. Cutting the lashes results in immediate mechanical removal of lice and nits (Couch et al., 1982) and destroys the habitat for survival and reproduction of lice. Topical treatment options include pilocarpine drops (Turgut et al., 2009), yellow mercuric oxide (Ashkenazi et al., 1991), malathion (Rundle and Hughes, 1993), cryotherapy (Awan, 1977), low mercuric oxide (Ashkenazi et al., 1991), malathion treatment of her two sons and husband.

Member were evaluated, which revealed the necessity of all members need to be examined. In the present case, all easily, if the parasite is detected in a member of the family, (Turgut et al., 2009). Because this disease can be spread temperature of 50°C kills both the lice and eggs in 30 min be washed and sterilised, as should brushes and combs. A clothes worn during treatment, including sheets, should pubis must be eliminated from the environment. The may be effective in controlling the infection further, P. dosage schedule because the administration of a single dose may be effective in controlling the infection further. P. pubis must be eliminated from the environment. The clothes worn during treatment, including sheets, should be washed and sterilised, as should brushes and combs. A temperature of 50°C kills both the lice and eggs in 30 min (Turgut et al., 2009). Because this disease can be spread easily, if the parasite is detected in a member of the family, all members need to be examined. In the present case, all members were evaluated, which revealed the necessity of treatment of her two sons and husband.

This report shows the importance of a correct diagnosis, because phthiriasis palpebrarum can be confused with blepharitis; it also supports systemic treatment and we recommend that these patients undergo diagnostic tests for other sexually transmitted diseases. Physicians should also remember that infection of children may indicate sexual abuse.

4. Conclusion

Dermoscopy is an easy, non-invasive and reliable for the diagnosis of various skin disorders tool, indications have expanded the diagnosis of various skin infections as is the case in our patient.

Dermoscopy is really an easy, safe, and reliable method to differentiate lice eggs containing nymphs from empty cases of hatched parasites and from amorphous pseudonits and eyelash casts.

Conflict of interest

None declared.

References


