

## PHTHIRIASIS PALPEBRARUM (*PTHIRUS PUBIS*): A CASE REPORT IN THE DOMINICAN REPUBLIC

**O. P. Perdomo\***

Instituto Tecnológico de Santo Domingo (INTEC) Área de Ciencias Básicas y Ambientales Av. de Los Próceres 49, 10602. Santo Domingo. Dominican Republic \*Corresponding Author

**A. Pineda**

Facultad de Ciencias. Escuela de Microbiología y Parasitología Universidad Autónoma de Santo Domingo Santo Domingo. Dominican Republic

**A. Binet Álvarez**

Facultad de Ciencias. Escuela de Biología Universidad Autónoma de Santo Domingo Santo Domingo. Dominican Republic

### ABSTRACT

*Pthirus pubis*, is a hematophagous and ectoparasite insect. We present the case of a 46-year-old male patient diagnosed with an eye infection. Phthiriasis palpebrarum is reported for the first time for the Dominican Republic.

**KEYWORDS :** Human Louse, *Pthirus pubis*, Dominican Republic.

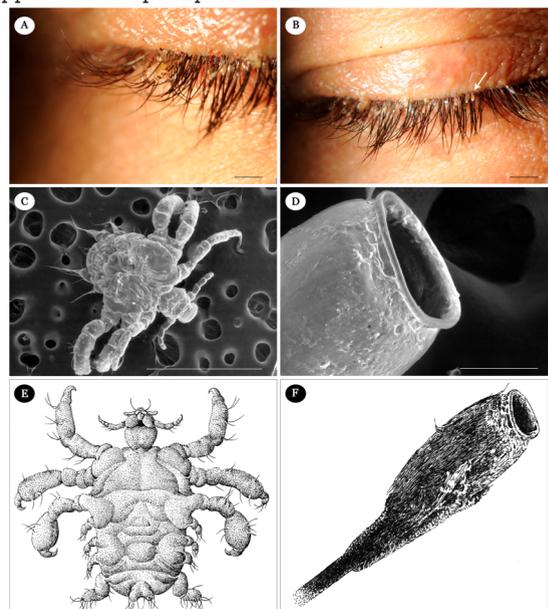
### INTRODUCTION

*Pthirus pubis* Linnaeus, 1758 (Anoplura: Pthiridae), is a hematophagous and ectoparasite insect, known as a crabs or lobster crab. The insect does not transmit any infectious agent, prefers temperatures from 28 to 32 °C and cannot live outside the body for more than one day (Alarcón, Hinostriza & Santamaría 2001). The typical infestation of *Pthirus pubis* in the world is approximately 2% of the adult population. According to Ibarra 1993, *P. pubis* has a cosmopolitan distribution. Records are often related to clinical records of sexually transmitted diseases or travel data (Díaz, 2006). Pubic lice have been present in the human population for thousands of years, but they have never been of great importance as a serious plague (Anderson & Chaney, 2009). In South America in pre-Columbian cultures and the Chiribaya culture in southern Peru, evidence of the presence of pubic lice in human remains is reported (Rick *et al.*, 2002). The infestation of these parasites is attributed to the lack of hygiene and promiscuity, it is a parasite that is transmitted sexually, but it has been observed that transmission can occur by contact with clothing, sheets and personal items of infected people (Pérez-Cano, 2013). It is found with high prevalence in prisons, brothels and similar places (Ragne *et al.*, 1995). In addition, the socioeconomic status and disaster situations are factors in the transmission (Díaz 2006). Information on reports of pubic lice is less frequent than head or body lice, yet their epidemiology is important due to the correlation with the appearance of other sexually transmitted diseases (STDs) and these adapt to a sedentary lifestyle in pubic hair, body hair, groin, perianal region and sometimes in eyelashes (Newsome *et al.*, 1979; Rundle, 1993; Klaus, Shvil & Mumcuogly, 1994; Hernández-Contreras *et al.*, 2001; Mimouni *et al.*, 2001; Pierzchalski *et al.*, 2002; Bingel 2005; Flinders & DeSchweinitz 2005; Pakeer *et al.*, 2008; Yagoob 2015; Tang & Ran 2017; Lin Li 2018). According to Mumcuoglu (2015), *P. pubis* infection is more frequent in adults than in children. Veraldi, Pontini & Nazzaro (2018), reports it on children's eyelashes and eyebrows and Nazzal *et al.*, (2019), indicates Phthiriasis Palpebrarum (eye infestation) as rare disease.

### CASE REPORT

We describe a case of infestation by *Pthirus pubis* in a 46-year-old adult man. The patient presented in our department due to pruritus in the left eye for 3 weeks. The skin test found small yellowish-brown flecks attached to the eyelashes. Brown or white eggs or nits containing nymphs were observed, these were firmly attached to the base of the eyelash hair. Adults were seen grabbing the hairs of the eyelashes with claws or

inserted in the eyelid and sucking blood. The adult females of *P. pubis* found are semi-transparent. The patient reports that approximately 1 month after his return from a trip to Austria in a tourist area, he felt severe itching in his left eye. The patient did not have a history of any STD, or known infestation in any other part of his body. Slit lamp biomicroscopy revealed multiple eggs attached to the eyelashes along with eight insects moving in the margin of the top line of the eyelash and much secretion accumulated in the tear. Examination of insects under light microscopy revealed translucent crawfish, wingless, with three pairs of legs and claws. Insect sizes were between 2 and 5.5 mm, the species was confirmed as Phthiriasis Palpebrarum caused by *Pthirus pubis* [Figure 1]. For identification we rely on Anane *et al.*, 2013 & Scalavastru *et al.*, 2017. The patient was successfully treated with mechanical removal of insects and nits together with the application of topical permethrin at 1%.



**Figure 1.** *Pthirus pubis*. A. Biomicroscopy of an adult's left eye. (Scale bar= 10 mm). B. The arrow indicates, eggs attached to the patient's eyelashes. (Scale bar= 10 mm). C. Scanning electron microscopy of adults (500 μm). D. Scanning electron microscopy of egg. (200 μm) E. Drawing of an adult female. (Scale bar= 0.5 mm). F. Drawing of egg attached to an eyelash. (Scale bar= 0.12 mm).

## CONCLUSION

It is necessary to alert the health centers of the country and the medical schools of the universities to promote informative and educational efforts of this insect and the importance of monitoring these ectoparasites to assess emerging and modifiable trends and behaviors in order to establish treatment and prevention measures. Phthiriasis Palpebrarum (ocular infestation) had never been reported in eyelashes in the Dominican Republic and is frequently misdiagnosed as blepharoconjunctivitis of bacterial or viral etiology.

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