

## Case Report

# A case of furuncular myiasis in an Italian patient: a “travel souvenir”

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## Abstract

Furuncular myiasis is a parasitosis of the skin that is commonly reported in the tropical areas and is caused by various agents including *Dermatobia hominis*. Knowledge of myiasis is limited in Italy, resulting in difficulties in its diagnosis and treatment. We report a case of imported furuncular myiasis in a 48 year old Italian patient who returned from Peru. A third stage larva of *D. hominis* was identified and the diagnosis of myiasis was confirmed.

**Key words:** Furuncular myiasis; *Dermatobia hominis*; Tropical neglected diseases.

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## Introduction

Myiasis is a parasitosis characterized by infestation of living vertebrates (humans and animals) caused by fly larvae that feed on necrotic or living tissues, and on liquid bodily substances of the host. The various species of flies have specific geographical distributions and are particularly abundant in tropical and subtropical areas (Central and South America, and tropical Africa). In Europe, most cases of human myiasis are regarded as "holiday souvenirs" from the tropical regions [1]. Most of the reported autochthonous cases of myiasis in Italy are caused by *Oestrus ovis*, *Cordylobia* spp. and *Dermatobia hominis*, which represent the principal causative agents of the imported cases [2].

Myiases are classified into: dermal/subdermal, nasopharyngeal and intestinal based on the anatomical site involved [3]. In Europe, cutaneous furuncular myiasis are uncommon; therefore, they may be undiagnosed or mistaken for other conditions, such as sebaceous cysts or furunculosis [4].

The human mobile population consists of people who for different reasons move from one country to another. This population includes migrants, refugees, political exiles, travelers and tourists, and is constantly growing. According to the International Organization for Migration (IOM), 241 million people or about 3% of the world population, live far from their country of

origin, and this has led to an increase in the incidence of tropical parasitic diseases in European countries, such as Italy [5].

## Case report

A 48-year-old patient presented with three painful growing nodular lesions on the scalp that were present for about one month. Each lesion had localized swelling and a serum-blood crust that may have been caused by previous failed extraction attempts (Figure 1).

The lesions appeared when the patient had traveled to Peru a month earlier and a diagnosis of myiasis was made by a local doctor. The patient underwent numerous unsuccessful medical examinations in Italy and none of the doctors claimed to have experience in treating this condition. Computed tomography (CT) and magnetic resonance imaging (MRI) of the brain showed the presence of fistulous tracts between some of the lesions and between lesions and the skin (Figure 2A, 2B).

Extraction of the larvae was achieved by covering the lesions with petroleum jelly, which deprived the parasites of oxygen, allowed them to escape, and therefore to be removed. One of the extracted larvae was analyzed at the Parasitological Analysis Laboratory of the Policlinico Umberto I of Rome and a third stage *Dermatobia hominis* was identified, according to the

morphological description outlined by Lane and Crosskey [6] (Figure 3).

**Discussion**

*Dermatobia hominis* (Family Oestridae), also known as botfly, is a two-winged fly that is widespread in the forest and jungle areas of Central and South America [7]. Botflies often use another insect (usually a mosquito) as a vector for spawning, which allows penetration of the larva into the tissues through the bite wound on the skin [8]. Poor hygienic and socioeconomic conditions are the main predisposing factors for the acquisition of myiasis. Furuncle lesions are painful nodules with a breathing pore from which intermittent movement of the larva can be observed. Symptoms commonly reported are pain, itching and a sensation of movement of the larvae.

Treatment of furuncular myiasis is aimed at the removal of the larva, which can be performed by occlusion with vaseline or other fatty substances, or by surgery through the infiltration of 1% lidocaine which acts by paralyzing the larva [3,4]. Myiasis may be prevented through the use of protective clothing and insect repellents that act against mosquitoes which can be vectors for transport of the eggs [2].

**Figure 1.** Painful crusted nodular lesions caused by furuncular myiasis. The appearance is atypical for this condition since the classical presentation is a furunculi like lesion with a visible central pore where the larval respiratory spiracle is visible.

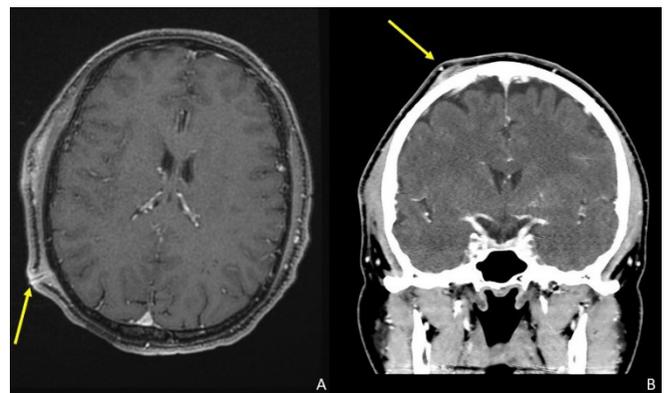


**Conclusions**

We report a case of furuncular myiasis caused by *D. hominis* in an Italian man who had acquired it during a trip to Peru. The patient consulted several doctors in Italy, but none had experience in the treatment of this condition.

The increase in migration and international travel for tourism and work makes it necessary for medical doctors to be aware of diseases that are not endemic in our country in order to be able to correctly diagnose and manage such diseases.

**Figure 2.** A: MRI image after Gadolinium showing the path with skin; B: CT image showing fistulous pathways between abscess and skin.



**Figure 3.** *Dermatobia hominis* larva (second stage).



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