

Cutaneous Myiasis caused by *Dermatobia hominis* Acquired in Jamaica

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ABSTRACT

The authors describe a case of cutaneous myiasis caused by *Dermatobia hominis* in a 23-year old Italian woman who contracted the infestation during a tour in Jamaica. The infestation was located on the back and was characterized clinically by a single inflammatory nodule. To our knowledge, this is the first case of cutaneous myiasis due to *Dermatobia hominis* acquired in Jamaica.

Miasis Cutánea Causada por *Dermatobia Hominis* Adquirida en Jamaica

S Veraldi, C Francia, MC Persico, V La Vela

RESUMEN

Los autores describen un caso de miasis cutánea causada por *Dermatobia hominis* en una mujer italiana de 23 años, quien contrajo la infestación durante una gira en Jamaica. La infestación estaba localizada en la espalda y se caracterizaba clínicamente por un nódulo inflamatorio. Hasta donde sabemos, éste es el primer caso de miasis cutánea por *Dermatobia hominis* adquirida en Jamaica.

West Indian Med J 2009; 58 (6): 614

INTRODUCTION

Myiasis are infestations caused by penetration of Diptera larvae into animal or human tissues. Cutaneous myiasis by *Dermatobia hominis* is found only in Central and South America (1), although, in 2000, Akhter *et al* described two autochthonous cases in Saudi Arabia (2).

We describe a case of cutaneous myiasis caused by *Dermatobia hominis* in an Italian woman who contracted the infestation in Jamaica. To our knowledge, this is the first report of cutaneous myiasis due to *Dermatobia hominis* acquired in Jamaica.

CASE REPORT

A 23-year old woman was admitted to our Institute because of a nodular lesion located on the back. The patient stated that she was in good general health and that she was not on any therapy. She also stated that the nodule had appeared two weeks earlier, during a trip to Jamaica. In that country, the patient visited Kingston, Port Antonio, Ocho Rios, Dunn's River Falls, Montego Bay and Negril on a two-week tour.

Dermatological examination revealed the presence of a nodule located at the centre of the back. It was erythematous,

roundish, 1 cm in diameter, with a small central ulcer (Figs. 1, 2), from which a clear serous fluid oozed. The patient complained of mild pruritus. General physical examination did not reveal anything pathological. All laboratory examinations were within normal ranges or negative. Bacteriological examination of the fluid was negative.

A careful examination of the ulcer revealed the presence of a larva. The latter was extracted by gently enlarging the ulcer and inducing lateral digital pressure (Fig. 3). A stage III larva of *Dermatobia hominis* ("botfly") emerged (Figs. 4–6). Neither topical nor systemic therapy was given. At follow-up at three weeks later, there was no evidence of any lesion.

DISCUSSION

Dermatobia hominis is a fly which lays its eggs on the body of haematophagous arthropods (usually mosquitoes, less frequently bugs, fleas, lice, ticks). This modality of laying is named phoresis.

At the time of the bite or sting of these arthropods, eggs immediately hatch and larvae penetrate the skin of the host through the site of the bite or sting or hair follicles. The penetration is asymptomatic. Larvae mature in the dermis or, less frequently, in subcutaneous tissue, where they burrow a pseudo-cystic cavity. The latter is in direct contact with the external environment by means of an orifice which corresponds to the posterior portion of the larva, where respiratory apparatus is situated. One to three weeks later, mature larvae spontaneously emerge and fall to the ground. Within three

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Fig. 1



Fig. 2

Figs. 1, 2: Inflammatory nodule, with a small central ulcer, located on the back.

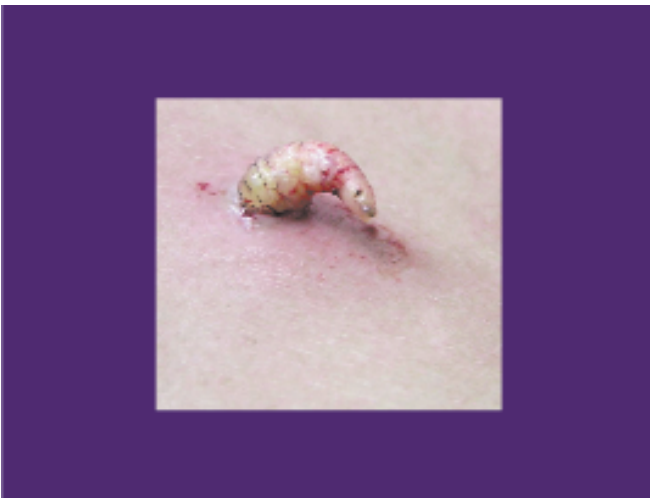


Fig. 3: Leakage of a larva by enlarging the ulcer and inducing by lateral digital pressure.

days, larvae pupate, then transforming 10 to 20 days later into adults (1).

From a clinical point of view, myiasis caused by *Dermatobia hominis* is initially characterized by an inflammatory papule: it appears 5 to 10 days after larva penetration, is roundish, few millimetres in diameter, pink to red in colour and asymptomatic. Subsequently, the papule enlarges until it becomes a nodule: this is erythematous, round, 0.5 to 1.5 cm in diameter, with a small central ulcer from which a clear serous fluid oozes. This fluid contains faeces of the larva, neutrophils, eosinophils and lymphocytes. The nodule resembles a furuncle, hence the terms of furuncular or furunculoid myiasis. The nodule may be asymptomatic or accompanied by an odd sensation of movements beneath the skin or mild pruritus or pain (1).



Fig. 4



Fig. 5:

Figs. 4, 5: Third stage larva of *Dermatobia hominis*, with characteristic rows of spines.



Fig. 6: Anterior portion of the larva.

Cutaneous myiasis due to *Dermatobia hominis* is endemic in Central and South America, from Mexico to Northern Argentina. In the Caribbean, this infestation was observed only in Trinidad and Tobago where it was imported from South America by livestock (3, 4). To our knowledge, the case we have described is the first acquired in Jamaica. In fact, in 1995, Sue-Ho and Lindo described a case of *Dermatobia hominis* myiasis in a Jamaican patient who actually

contracted the infestation in Belize, a well-known endemic country for *Dermatobia hominis* (5). Old as well as recent articles (6, 7) on human myiasis in Jamaica confirm our statement. In the study by Hemmings *et al* (7) from Jamaica, more than 80% of cases of myiasis were caused by *Cochliomyia hominivorax*, commonly known as the New World Screwworm.

This case serves as a reminder that, as Jones wrote, “*in a mobile society, diseases, as well patients, can travel*” (8).

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