

# Cutaneous Myiasis

K. Mostafavizadeh, A.R. Emami Naeini,  
S. Moradi

## Abstract

Myiasis is an infestation of tissues with larval stage of dipterous flies. This condition most often affects the skin and may also occur in certain body cavities. It is mainly seen in the tropics, though it may also be rarely encountered in non-tropical regions. Herein, we present a case of cutaneous furuncular myiasis in an Iranian male who had travelled to Africa and his condition was finally diagnosed with observation of spiracles of larvae in the lesions.

**Iran J Med Sci 2003; 28 (1):46-47.**

**Keywords** • Myiasis • larva • ectoparasitic infestation

## Introduction

**C**utaneous myiasis is widespread in unsanitary tropical environments and occurs also with less frequency in other parts of the world.<sup>1</sup> Furuncular cutaneous myiasis is caused by both human botfly and tumbu fly.<sup>2,3</sup> Tumbu fly is restricted to sub-Saharan Africa.<sup>4</sup> Infective larvae penetrate human skin on contact, causing the characteristic furuncular lesions. The posterior end of larvae is usually visible in the punctum and the patient may notice its movement. *Cordylobia anthropophaga* usually appears on the trunk, buttocks, and thighs.<sup>5</sup>

## Case Presentation

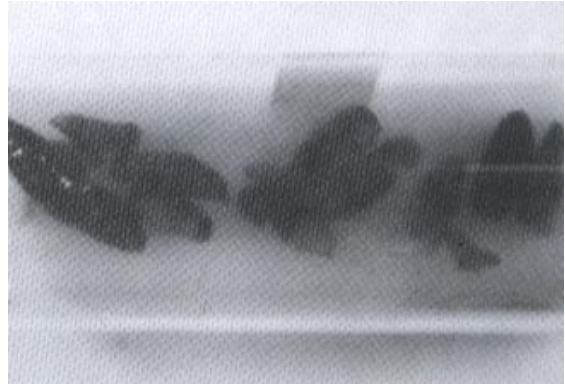
A 40-year-old Iranian male, who had made a recent visit to Africa for business, developed several red pruritic papular lesions on his body especially on his thighs. Over several days, the lesions developed into larger, boil-like lesions with overlying central cracks (Fig 1). There was some tingling sensation in the lesions but no constitutional symptoms were present. He was visited by a physician in Zimbabwe who diagnosed the condition as staphylococcal furuncle and prescribed antibiotics for him. There was poor response to this therapeutic management. After 10 days he returned to Iran and was visited by an infectious diseases specialist, who identified larvae in the center of one lesion. The lesions were treated by covering with petroleum gel for a few hours and partly emergent larvae were extracted with digital pressure and a forceps. Laboratory tests, including complete blood count and blood sugar, were normal. HIV serology was negative. The larvae were sent to the parasitology laboratory of Isfahan, and were diagnosed as *Cordylobia anthropophaga* (Fig. 2).

\*Department of Infectious and Tropical Diseases, Isfahan University of Medical Sciences, Isfahan, Iran.

**Correspondence:** AR Emami-Naeini MD, Department of Infectious Diseases, Isfahan University of Medical Sciences, Al-Zahra Hospital, Isfahan, Iran, P.O.Box: 914.  
**Tel:** +98-311-6614667  
**E-mail:** [A\\_emami35@hotmail.com](mailto:A_emami35@hotmail.com)



**Fig 1:** Furunculoid lesions on the skin



**Fig 2:** Cordylobia anthropophaga Larvae extracted

### Discussion

This case presents a rare type of cutaneous infestation that practitioners in non-endemic areas must keep in mind if their clientele return from a tropical country. As travel to endemic regions becomes more common, physicians in non-endemic areas may be confronted with these cases. The disease is recognized by careful inspection and searching for the posterior end of the larvae in central punctum, which may move up and down in about once a minute.<sup>6,7</sup> Ultrasound is a new diagnostic tool which can localize the larvae and determine their size.<sup>8</sup> Furunculosis is most often located on the buttocks, face or neck and is painful and tender, and often accompanied with fever and constitutional symptoms.<sup>9</sup> Tungiasis which is another differential diagnosis is originally native to South America, but may be seen in Africa and Mexico.<sup>10,11</sup> In humans, the *Tunga penetrans* establish themselves between the toes, under nails, and on the soles.

The treatment strategy for myiasis is to use occluding substances like Vaseline and then removing the larvae by firm pressure around the edges of the lesion or with a forceps.<sup>7,12</sup> Occasionally the punctum may require to be enlarged surgically.<sup>13</sup> A topical formulation containing ivermectin 1% in propylene glycol is reported to be effective.<sup>7</sup>

### References

- 1 Poindexter HA: Cutaneous myiasis. Arch Dermatol 1979; **115(2)**: 235.
- 2 Wildy GS, Glover SC: Myiasis due to tumbu fly larva. Lancet 1982;**1(8281)**: 1130-1
- 3 Laurence BR, Herman FG: Tumbu fly (Cordylobia ) infection outside Africa. Trans R Soc Trop Med Hyg 1973; **67(6)**: 888.
- 4 Calert H: Myiasis from the tumbu fly two cases reported. Br Med J **1961** :1513-4.
- 5 Lane RP, Lowell CR, Griffiths WA, Sonnex TS: Human cutaneous myiasis a review and report of three cases due to *Dermatobia hominis*. Clin Exp Dermatol 1987;**12(1)**: 40-5 .
- 6 Bailey GG, Moody AH: Cutaneous myiasis caused by larva of cordylobia anthropophaga acquired in Europe. Br Med J (clin Res Ed) **1985;290(6480)**: 1473- 4.
- 7 Habib Thomas P. Skin Diseases: Diagnosis and Treatment, 1<sup>st</sup> ed. Missouri: Mosby, **2001**:244.
- 8 Bowry R, Cottingham R: Use of ultrasound to aid management of late presentation of *Dermatobia hominis* larva infestation. J Accid Emerg Med.1997;**14(3)** :177-8.
- 9 Braunwald E, Fauci AS, Kasper DL, et al, eds: Harrison's Principles of internal medicine,15<sup>th</sup> ed. USA: Mc Graw- Hill , **2000**:139- 893.
- 10 Douglas-Jones AG, Liewelyn MB, Mills CM: Cutaneous infection with *Tunga penetrans*. Br J Dermatol 1995; **133(1)**: 125-7.
- 11 Ibanez-Bernal S, Velasco-Castrejon O: New records of human tungiasis in Mexico. J Med Entomol 1996; **33(6)** : 988-9.
- 12 Brewer TF, Wilson ME, Gonzalez E, Felsenstein D: Bacon therapy and furuncular myiasis. JAMA 1993; **270(17)**: 2087-8.
- 13 Mandell GL, Bennett JE, Dolin Raphael: Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases. 5<sup>th</sup> ed. Philadelphia: Churchill Livingstone, **2000**:2978-9.