

FURUNCULAR MYIASIS

Muhammad Tariq

Military Hospital Rawalpindi

INTRODUCTION

Myiasis is the invasion of living tissues of humans and other animals by the fly larvae (maggots) of the order Diptera [1]. Despite the presence of many species, the two common flies that affect human beings in the tropics are *Dermatobia hominis*, the human botfly and *Cordylobia anthropophaga*, the tumbu fly [2].

Cases of human cutaneous myiasis caused by maggots of the tumbu fly have also been reported from Asia region, southwestern Saudi Arabia [3]. However, most of the cases reported outside the tropical Africa had imported their disease from Africa [4].

In patients presenting with cutaneous lesions after return from tropical countries, myiasis has to be considered as a differential diagnosis. Most physicians may never encounter myiasis outside the endemic areas. However, it should be included in the differential diagnosis of a new skin lesion in patients who have traveled to endemic areas. The knowledge of the disease, its management and prevention is necessary for all the individuals who are planning to visit tropical Africa.

CASE REPORT

A 35 year old Pakistani soldier serving in United Nation mission in Liberia (UNMIL) at Boomy County presented to Pak Level-II Hospital Tubmanburg, Liberia, on 26th May 2006, with three days history of a painful swelling in his right upper arm. Except for the dull pain and itching around the swelling, the patient was feeling well. He reported no fever. He had come to Liberia from Pakistan about four months earlier. On examination, a boil about 1 cm in size, was noticed in his right upper arm. There were no visible overlying skin abrasions, but the skin was inflamed and red around the boil. The lesion was tender on

palpation. Rest of his clinical examination was unremarkable. He was prescribed clarithromycin 500mg twice daily and Ibuprofen 400mg three times daily and no further investigations were carried out.

Three days later he again presented with a purulent discharge from his old skin lesion. On closer examination of the lesion, there was a small, central dark point discharging purulent material. Gentle squeezing of the lesion expressed an intact oval-shaped, about 8 mm long larva of tumbu fly from it. Once cleaned and disinfected, the empty dermal cavity resolved quickly. There were no other findings or constitutional symptoms, and no laboratory studies were requested.

DISCUSSION

Human myiasis caused by the maggots of African tumbu fly is relatively common and constitutes a potential public health problem in the affected parts of the tropical Africa [5]. As Africa is becoming a common destination for our troops, many of them are expected to present with cutaneous lesions secondary to myiasis. Furuncular myiasis is not uncommon in Pakistani troops serving in UN Peacekeeping Missions in tropical Africa. Two hundred and forty eight cases of furuncular myiasis were observed among Pakistani soldiers in Sierra Leone, Africa, in one year [6].

Tumbu fly larva produces a painful cutaneous swelling that looks like a furuncle [7]. The lesion usually begins as a papule, gradually enlarging to an erythematous, dome-shaped nodule containing a central pore through which the larva breathes. Exact size of the lesion depends on the stage of development, but generally the nodular lesion is 1 cm in diameter with an ill-defined, indurated inflammatory edema extending out about 1 to 2 cm. The central hole is about 3 mm in diameter and easily visible. The furuncles can be found in any part of the body including trunk, buttocks, thighs, head, legs and arms.

Correspondence: Lt Col Muhammad Tariq,
Classified Medical Specialist, MH Rawalpindi
Email: doctarique@gmail.com

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The lesions may have a discharge containing pus, blood, and portions of the cast larval skin. Itching and pain accompany the infestation. The inflammatory reaction around the lesion may lead to lymphangitis and regional lymphadenopathy. Secondary infection can occur, especially if the larva dies in situ or if the patient incompletely removes the larva. Systemic manifestations are not prominent.

Rarely, furuncular myiasis may affect the breast in females. Some of the signs and symptoms of Tumbu fly mastitis may be similar to those of carcinoma of the breast. High index of suspicion in endemic areas can help in the diagnosis and treatment [8]. Secondarily infected furuncular myiasis may become a source of sepsis and may lead to perinephric abscess [9].

The diagnosis of furuncular myiasis is suggested by discomforting skin lesions with a central breathing pore that emits bubbles when submerged in water. A small drop of saliva placed on the punctum may also elicit this sign. The differential diagnosis of myiasis should include cellulitis, staphylococcal carbuncle, leishmaniasis, a sebaceous cyst, and an embedded foreign body. Many nodular lesions eventually ulcerate if the inflammatory process is intense but lesions from myiasis do not ulcerate.

Treatment of furuncular myiasis involves removal of the larvae [10]. Removal of the larva by occlusion of the opening is commonly attempted first. The air pore can be occluded by coating it with petroleum jelly. Occlusion of the air pore asphyxiates the larva, which then protrudes far enough to be expressed manually

by squeezing the lesion or by grasping the larva with a forceps.

Another method involves surgical exploration and removal of the larvae under local anesthesia. Surgical removal sometimes results in damage to the larva with retention of larval fragments in the wound. Care should be taken not to burst the maggots on removal. The lesion heals rapidly after the larva is removed. The complications i.e, abscess, sepsis, or granuloma provoked by dead larvae or body parts left behind are rare.

To prevent Tumbu fly from laying eggs on drying clothes, they should be dried indoors or in a place protected by fly mesh. The ironing of dried clothes before wearing is an effective method of destroying the eggs.

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