

Cutaneous and oral myiasis infecting human in Iraq

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ABSTRACT

Five human cases infected with myiasis in a village (10) kilometers southern Babylon governorate, four of them ranging between (18) months to (12) years of age, suffering from cutaneous myiasis, while the fifth case was a farmer with (53) years old suffering from oral myiasis, all cases recorded for the first time in Iraq.

The species specific causing cutaneous problem was identified as a botfly (*Dermatobia hominis*), while the causative agent of oral myiasis are related to the family *Sarcophagidae*, genus *Wohlfahrtia spp.* All cases received medical and surgical treatment.

Key Words: Myiasis, oral, cutaneous.

الخلاصة

خمسة حالات بشرية من قرية تبعد (١٠) كليومترات جنوب محافظة بابل أربعة منها يتراوح أعمارهم بين (١٨) شهراً و(١٢) سنة كانوا يعانون من الإصابة الجلدية الاخرافية ليرقات الذباب، بينما كانت الحالة الخامسة بعمر (٥٣) سنة يعمل فلاح يعاني من الاخراق الفمي للثة بيرقات الذباب. لقد تم التعرف وتشخيص النوع المسبب لمشكلة الاخراق الجلدي من نوع ذبابة النغفة (الديرماتوبيا هومينيس)، بينما كان العامل المسبب لحالة الاخراق الفمي يعود لعائلة (السااركوفيجيا) من جنس الولفارشيا... إن جميع الحالات المصابة تم علاجها دوائياً وجراحياً.

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INTRODUCTION

Myiasis is the infestation and invasion of living tissue of man and other mammals by dipterous larvae⁽¹⁾. The fly deposited ova in open wound or in natural openings, where they hatch transform into larvae; they feed for a certain period on dead necrotic tissue or living until they reach the puparium stage.

Myiasis occurs in many anatomic sites of the body of man and animals including skin, eyes, ears, nasopharynx, genitourinary tract and mouth⁽²⁾.

Over (50) fly species have been reported to cause human myiasis⁽³⁾. No effective chemotherapeutic agents are available for the treatment of any form of myiasis^(2,4). These conditions were first described in (1840) by Hope⁽⁵⁾, and since then many cases of myiasis effecting different human organs have been reported^(1,6). Although all age groups may be affected, the damage caused to infants is more sever and may be fatal.

Scott⁽⁷⁾ reported in his review study that there are (120) cases of human cutaneous myiasis, while the oral myiasis is very rare, only one case was reported over a period of (10) years (1952- 1962).

The purpose of this article is to present a further cases of cutaneous and oral myiasis from patients suffering from Dermatological lesion, oral and dental problems due to infestation with the larvae of flies in this country.

PATIENTS AND METHODS

During June (1999) a four cases of cutaneous myiasis of diffuse type found in patients ranging from (18) months to (12) years of age thought to have been infested with fly larvae cutaneous myiasis, and one case of (53) years age suffering from oral problem and periodontal condition attended the dental clinic. All patients lived in a village (10) kilometers southern Babylon city; they are rural in contact with animals (sheep and cattle).

Patients with cutaneous type are examined by Dermatologist they have erythematous papular, eruptions over the trunk lower abdomen, thigh, arms and necks and only one patient, nine years old, have another lesions on the face and cheek near the mouth commissure. The enlarging vesicles were noted to have a small opening at one side and the correct diagnosis of massive myiasis was made, at last more than (35) infected sites were counted in each patient. The larger larvae were extracted by gentle pressure or by other method of extraction include the use of lidocain and use of fatty substance to occlude the breathing hole⁽¹⁰⁾. So that they emerged through the tiny hole. The first case of oral myiasis was reported in patient of a (53) years old farmer at the same village attended the dental clinic in the health center service. The dentist surprise when examine carefully the gum and teeth, as noticed many small crowded worms motile and twisted on each others, located between the teeth and gum of the lower incisors in deep pocket, the patient was complaining from itching sensation in lower gum for

the past few days. Oral examination revealed poor oral hygiene and massive dental calculus. The larvae removed by fine forceps and put in small bottles containing (70%) alcohol and send to the entomological laboratory for further identification.

RESULTS

The larvae removed from the skin lesion were (1.5x0.5) mm. whitish in colour, actively motile and retracted from the skin surface when touched, whereas the larvae removed from the patient mouth were (5-8) mm x (2-3) mm whitish in colour with circumferential spotted pattern. All larvae were after an incubation period (5-8) days in the entomology laboratory, transformed into brown barrel-shaped puparia. The pupa stage fermented after (4-6) days, become adult flies. Entomological identification showed that the flies belonged to the order of Diptera related to the genus *Dermatobia spp.* and genus *Wohlfahrtia*, these are non-blood-sucking flies.

DISCUSSION

Myiasis is an uncommon in many tropical countries⁽⁸⁾, but rarely seen in Iraq. In West Africa the tumbu fly *Cordylobia anthropophaga* is the common case of cutaneous myiasis⁽¹¹⁾. In Mexico and Latin America the human botfly *Dermatobia hominis*, is the major case⁽⁹⁾. Some species of flies that cause Cutaneous Myiasis must lay their eggs in broken skin, but neither the tumbu fly nor the human botfly require broken skin. Cutaneous myiasis caused by the larvae of *Dermatobia hominis* clinically characterized by the appearance of a papule which is erythematous, round, few millimeters in diameter within a few days the papule enlarges until it become a nodule which is a round, inflammatory lesion, (1-2) cm. in diameter circumscribed by an erythematous halo. At the top of the nodule around, (1-2) mm. diameter ulcer is present it corresponds to the posterior portion of the larva, where the respiratory apparatus is situated. The central part of lesion drained a small amount of clean sero-haematic or purulent fluid oozes from the ulcer. The fluid contains faeces of the larva, dead neutrophils, eosinophils, lymphocytes and necrotic material. The lesion is accompanied by prurities, burning sensation beneath the skin⁽¹²⁾.

Myiasis is an uncommon condition produced due to invasion of tissues by maggots, the larvae of flies. This phenomenon is mainly reported in developing countries or in individual living in rural area⁽⁸⁾. Most cases are reported as occurring in the summer when the flies hatching. Individuals in colder climates are much less effected as compared to those living in tropical and subtropical areas^(1,13).

Oral myiasis occurs following direct infestation of oral tissue with the fly eggs. This unusual type may only happen in unconscious or sleeping individuals when the mouth is left open. Necrotic tissue present in advanced periodontal disease, form a good environment in which the fly can lay their eggs. After hatching the larvae need warm and moist environment for

further development. The periodontal pocket is suitable for these requirements and also given mechanical protection to the larvae. They grow and increase in size with crawling movement that give rise to the itching sensation and discomfort. The patient with oral myiasis usually breath through the mouth. It was thought that while sleeping with the mouth open a fly might have infested with ova in the buccal gingiva of lower teeth.

Oral myiasis is an accidental phenomenon, which can only arise on rare occasions when a fly deposits over an open mouth of a person with poor oral hygiene. A good oral hygiene is very important to ensure against oral myiasis.

To our knowledge the present five cases of cutaneous and oral myiasis are first to be recorded in this country.

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