

A case report on oral myiasis in Saudi Arabia

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الالتهاب العموي الذبائي أول حالة تسجل في المملكة العربية السعودية
الالتهاب العموي الذبائي يعتبر من الأمراض النادرة والتي غالباً ما تسجل في الأقطار النامية. أساساً يتسبب المرض بغزو يرقات الذباب للحسم البشري والتي تصيب كل الأعمار وقد تكون قسالة في الرضع. هذه المقالة تصف
تواحد الالتهاب الذبائي العموي على شكل تضخم في الجيب اللثوي لطفل سعودي، يبلغ من العمر ٨ سنوات، قدم حديثاً من سوريا. في هذه الحالة تم استخراج ١٢ يرقة ذباب من الجيب اللثوي للشبة الأمامية العلوية. لقد
وجد أن تصنيف نوعية هذه اليرقات يعود إلى عائلة الذباب المسماة باسم ساركوفاجيدا.

Oral myiasis is a rare disease that is mostly reported in developing countries. It is primarily caused by the invasion of the human body by fly larvae. This case report describes the presentation of oral myiasis as an enlarged buccal gingival pocket in an 8-year old Saudi male who recently returned from Syria. This case of myiasis was caused by flies of the *Sarcophagidae* family which can affect all age groups, and may be fatal in infants.

Introduction

Oral myiasis (myia means "fly" in Greek) is the term used to describe the invasion of living tissue of humans and other mammals by fly larvae.^{1,14,17} In some animals, larvae of the flies of the *Gasterophilidae* family can, for example, produce gingival and lingual infections in horses.^{2,14}

Scott, who presented 120 human cases in North America between 1952 and 1962, reported the first case of myiasis in a human oral cavity in 1964 which was the only case (0.9%) of oral myiasis in the series.^{3,17} Oral myiasis affecting the oral cavity is rare and is mostly caused by fly larvae which belong to the *Calliphoridae* and *Sarcophagidae* families.^{4,15,16} Although all age groups may be affected, the damage caused to infants is more severe and may be fatal.^{5,6}

This type of infection occurs mainly in tropical areas and is associated with inadequate public and personal hygiene. Adult flies are strongly attracted to putrefactive odors and usually lay eggs on necrotic areas in wounds, blood or natural openings where they hatch and transform into larvae which feed on the host's dead or living tissue, liquid body substance or ingested food.

This article describes a case of oral myiasis in the Kingdom of Saudi Arabia.

Case Report

An 8-year-old male was referred to a dental clinic of the Saudi Arabian Oil Company (Saudi Aramco) in Abqaiq which is located in the Eastern Province of Saudi Arabia. The patient complained

of a swelling of his gum accompanied by a mild itching sensation. He also noticed worm-like structures in the maxillary anterior teeth area. His past medical history revealed frequently blocked nose and cough with a history of mild snoring that had been treated recently. Three to four days prior to presentation at the dental clinic, the patient began to feel pain and noticed a swelling of his gum in the area an upper central incisor, #11.

Oral examination revealed mixed dentition, fair oral hygiene and no carious lesions. The buccal gingiva of #11 formed a deep pocket containing about 9 visible living larvae (Fig. 1). The gingiva was normal in color with mild signs of localized marginal inflammation on the same infected tooth. Periapical and panoramic radiographs



Fig. 1. Living larvae on tooth # 11 buccal.

showed no abnormal findings.

Twelve living larvae were collected from the buccal gingival pocket of the upper central incisor, followed by localized scaling and irrigation with normal saline. The patient was followed-up for 8

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weeks. Healing was satisfactory and the gingiva reattached to the tooth with a pocket depth that did not exceed 3 mm (Figs. 2 and 3). All blood, urine and stool investigations were within normal. Oral and nasal examination revealed normal findings.

The larvae that were removed measured 7 mm in length and 3 mm in diameter. They were whitish in color with a circumferential spotted pattern (Fig. 4). The larvae were sent to the Entomology Department and were identified as the larvae of



Fig. 2. Healing 24-hrs post-operatively.

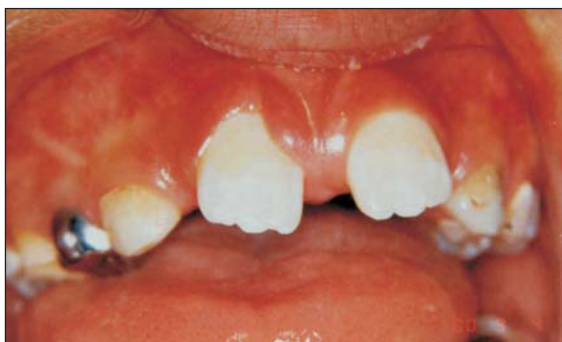


Fig. 3. Healing 12 days post operatively.



Fig. 4. Larvae, after removal from the gingival pocket. (7mm long and 3mm in diameter).

flash flies belonging to the *Sarcophagidae* family.

Discussion

Myiasis is an uncommon disease in humans and can take many forms including infection of skin, gut, nasal cavities, eyes and occasionally the oral cavity.⁷ Most of the cases reported in developing countries were due to limited hygiene, poor housing conditions and a warm climate; all predisposing factors.

Three classifications for this disease have been reported based on:

1. The organ or tissue involved.
2. The mode of infection which is divided into three groups:
 - a. Flies that lay eggs in garbage and feces and which may also lay eggs in open wounds.
 - b. Flies that lay eggs subcutaneously.
 - c. Ingestion of contaminated food containing fly eggs.
3. The affinity of flies to viable or non viable tissue.^{8-10,17}

This unusual type of gingival myiasis may occur in an unconscious or sleeping person when the mouth is left open. Periodontal disease of the oral cavity, with pockets, provides a perfect environment for the eggs to hatch and for the larvae to grow in the warm and moist conditions. Oral myiasis can also be primary or secondary to nasal involvement. Alcoholism, senility, hemiplegia and mental retardation may also facilitate the development of oral myiasis.

The treatment of choice, in the present case, is complete removal of the larvae from the infected areas, followed by deep scaling and irrigation with normal saline. Healing following this treatment is usually uneventful.¹¹

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