



## Case Report of a Case of Oral Myiasis

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### Abstract

*Oral myiasis is a rare disease caused by the larvae of certain dipteran flies. It is mostly reported in developing countries and the tropics. Herein, a case of oral myiasis in the maxillary nasopalatine region of a 65-year old female is being reported. The myiasis was caused by the larvae of *Chrysomya bezziana* species. The clinical findings are presented.*

### Introduction

Myiasis was first described by F. W. Hope in 1840. Myiasis is derived from the Greek word “myia,” meaning fly and “asis,” meaning disease. Myiasis is caused by dipterous larvae that feed on the host dead or living tissues, liquid body substances or ingested food. Myiasis frequently occurs in rural areas, infecting livestock, and in humans prevails in unhealthy individuals in third world countries. The incidence of oral myiasis is comparatively lesser than that of cutaneous myiasis as oral tissues are not permanently exposed to the external environment. Cases of oral myiasis have been reported to occur following dental extraction, nosocomial infection, in drug addicts, visits to tropical countries, in psychiatric patients and conditions that are likely to cause prolonged mouth opening, like mouth breathing during sleep, senility, alcoholism and mental

retardation. The flies are attracted to the bad mouth odor due to neglected oral hygiene or fermenting food debris. Persistent mouth opening facilitates the deposition of the eggs by the adult fly with India's subtropical climate conducive to their breeding.

### Case Report

A 65-year-old female patient resident of Ramgarh, Bihar came to my practice with a painful opening behind the maxillary incisors, she also noticed worms in the mouth for the past 5-6 days. She also complained of inability in mouth opening. Pt. was of poor socio-economic status, poorly built and apprehensive.

Intraoral examination reveals a swollen, erythematous area surrounding the open wound. Several maggots were seen in the wound opening. Ulcers were developed at the corner of the mouth. The patient had poor oral hygiene and had a mouth breathing habit while sleeping. The case was diagnosed as oral myiasis. The random blood sugar of the patient was within the normal limit.



Figure 1: Maggots in the wound at the time of presentation

The treatment included flushing the affected area with turpentine oil followed by the administration of local anesthesia and manual removal of maggots with tweezers. Around 50-60 maggots were removed. The area was then washed with saline, followed by irrigation with betadine.



Figure 2: Flushing of the affected area with turpentine oil



Figure 3: Removing the maggots



Figure 4: Maggots

Broad-spectrum antibiotics amoxicillin with clavulanic acid, Aceclofenac with paracetamol and serratiopeptidase, multivitamins, Benzydamine mouthwash, metronidazole for local application and mugel gum paint for ulcers at the corner of the mouth were prescribed. This procedure was repeated until the maggots were completely removed. The next day the edema had subsided considerably and mouth opening was also increased.



Figure 5: Next day healing

The procedure was repeated after 5 days.



Figure 6: 5th day healing of tissue after removing the larvae.

## Discussion

Myiasis of orodental complex is a rare entity commonly caused by the common Indian housefly *Musca Nebulo*. They are found commonly in human habitats with poor hygiene and passable sanitation especially during the summer and rainy seasons. Clinically, myiasis can be classified as primary or secondary. They are based upon host dependence, mode of infestations, and anatomic sites. Primary myiasis is caused by larvae that feed on living issues (biophagous). This form of myiasis is commoner in cattle and rare in humans. Secondary myiasis is caused by flies that feed on dead tissue (necrobiophagous). This is the more common type and infests patients with lesions that have necrotic cavities. The severity of myiasis depends upon the location of the infestation, lesions, and tissue inflammation. Many species of Dipterous flies among the genera *Chrysomya* and *Cochliomyia* have been reported to be the most important obligatory myiasis among human and/or domestic animals.

The lifecycle of a fly commences with the egg stage followed by the larval stage, the pupal stage, and finally the adult fly. The requisites for egg-laying and survival of the larvae are moisture, necrotic tissue, and suitable temperature. Thus wounds, open sores, scabs, and ulcers contaminated with discharges make possible way for the same. Modes of infestation in humans may occur in two ways, either accidentally with direct inoculation by the fly or by ingestion of infected material such as meat. In the present case, the location of the lesion is in the anterior part of the maxilla, implying a direct inoculation of the tissues.

The condition is frequently associated with mental deficiencies, where dexterity and impetus for maintaining oral hygiene are poor. Although the disease affects children commonly, a few cases of oral myiasis in children less than three years of age have also been reported. These patients are completely dependent on their caregivers; however, in situations of low socioeconomic level, these caregivers tend to neglect the oral hygiene of the patients because of the lack of health education. The patient's precarious oral hygiene and halitosis are the probable risk factors in the present case in addition to its mental status.

During the lifecycle of the parasite, the developmental transition via the larval stage, at all times, requires an intermediate host. The prevailing oral hygiene status provided the suitable substrate and temperature for the larvae. The stage of larvae lasts for six to eight days during which they are parasitic to human beings. They are photophobic and tend to hide deep into the tissues for a suitable niche to develop into a pupa. The present case also showed the larvae burrowed deep inside the wound in the upper labial vestibule.

Standard guidelines for the management of oral myiasis do not exist, but more than a few authors note that the ideal approach is to remove all larvae and perform surgical debridement.

The treatment incorporated in our case was simple and involved usage of antilarval measures (turpentine oil) followed by removal of the larvae

### **Conclusion**

Oral myiasis is a rare and preventable disease. It can be prevented by controlling the fly population, maintaining good oral and personal hygiene such as reducing the decomposition odor, cleaning and covering the wounds, and educating the susceptible population where basic sanitation is of a low standard.

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