

MENTAL DEPRIVATION AND ORAL MYIASIS: A SPECIAL CASE REPORT

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Abstract

Oral myiasis is a rarely reported pathology frequently seen in patients who show prolonged illness and are debilitated or unable to take care of their own wellbeing. It has a predilection for poor oral hygiene or prolonged exposure of the oral mucosa to the unhygienic environment. Inflammation, destruction and necrosis of soft as well as hard tissues are the characteristic features of disease.

This paper presents a classic case of oral myiasis in a 12 year old boy with mental retardation with incompetent lips and periodontal disease. Treatment consisted of manual removal of maggots, with the help of forceps and turpentine oil, surgical debridement of wound followed by broad-spectrum antibiotics and subsequent treatment of underlying periodontal disease.

Oral myiasis is a serious and debilitating condition, showing predilection amongst unhealthy patients with psychiatric disorders. The provision for basic sanitation and general cleanliness of dwelling areas and maintaining good oral and personal hygiene remains the primary preventive measure in most of the cases.

Key words: Larvae, Maggots, Necrosis, Oral Myiasis, Turpentine Oil.

Introduction

Body cavities of human beings have been attacked by infestations with live insects or larvae since centuries. The word Myiasis is derived from Greek "Mya" meaning fly and "iasis" meaning disease.¹ Hope. F.W. in 1840 was the first person who coined the term "Myiasis" to describe a human disease which originated from dipterous larvae. Common etiological factor for Myiasis is dipterous larvae that breed on dead or living tissues of host, liquid body substances and ingested food.² The incidence of disease is higher in developing tropical and subtropical countries and less frequent in western countries. The larvae responsible for the disease prefer to grow in warm and humid environment; therefore myiasis is preferably seen in summer months. Myiasis have been classified in two categories, Primary myiasis caused by larvae feeding on living tissue and commonly seen in animals, and rarely seen in humans. Secondary myiasis which is caused by flies that feed on dead tissues, this is more common variant and seen in patients with necrotic lesions.³ According to sites involved in the body the myiasis can be oral, ocular, cutaneous, nasopharyngeal and intestinal and urogenital.⁴

Case Report

A developmentally disabled 12-years-old male patient preferably of low socioeconomic status was screened at dental health camp by Department of Public Health Dentistry and was referred to Department of Oral Medicine & Radiology GDC Srinagar; patient was accompanied by his mother with chief complaint of swelling and pain in upper front region of jaw since 4 days. Patient gave history of pricking type of pain radiating to the upper part of the face which was confirmed by parent accompanying him. Complete medical history revealed that patient was mentally challenged. On examination, the patient was lean built and mal nourished with waddling gait, apprehensive and febrile.



Figure 1: - Extra oral profile with diffuse swelling of upper lip and maxillary region

The patient resided in a rural setting of Jharkhand, India and had shifted to Srinagar, Jammu & Kashmir for begging. Patient was from a low socioeconomic background and had a very poor oral hygiene. Extra-oral examination revealed a solitary diffuse swelling measuring 2 × 4 cm involving the upper lip and the surrounding structures. (Figure 1)

Intraoral examination revealed diffuse necrosis of soft tissues as well as alveolar processes with relation to 11, 12, 21 and 22 region. (Figure 2)

The swelling was soft and tender on palpation and periorbital oedema was present. Lips were incompetent and on exploration diagnosis of oral myiasis was made clinically by presence of dipterous larvae in oral cavity.



Figure 2: - Ulcerative lesion of maxillary alveolus revealing live larvae and extensive bone destruction

Live greyish white maggots were seen crawling through the opening. The treatment included flushing the affected area with turpentine oil followed by the administration of local anaesthesia and manual removal of maggots with tweezers. The wound was debrided under local anaesthesia and roller gauze impregnated with turpentine oil was inserted into the cavity created as a result of tissue necrosis. 40–50 live maggots were harvested from the affected region. (Figure3)



Figure 3: - Live Larvae removed from necrotic lesion. Copious irrigation with normal saline and povidine iodine was performed. Broad spectrum injectable antibiotics like amoxicillin with clavualnic acid and oral ibuprofen with

paracetamol were prescribed. This procedure was repeated again until the maggots were completely removed. Further patient was referred for oral prophylaxis and periodontal treatment.

Discussion

Myiasis is caused by larvae that belong to a dipteran family. They lay their eggs on wounds and necrotic tissue.⁵ Shira in 1943 reported very first case of oral myiasis and literature of myiasis was reviewed by Lim from 1974.⁶ Myiasis occurs most commonly on anatomic locations such as eyes, nose, lung, ear, genitals and rarely in oral cavity. Cutaneous myiasis occurs more frequently than myiasis of oral cavity as most of the times oral tissues are covered with lips, however oral myiasis are mostly reported in patients with neurological deficits such as epilepsy with lacerated incompetent lips, advanced periodontal disease, extraction sites with very poor oral hygiene.⁷ The main contributing factors responsible for myiasis include low socioeconomic status, immunosuppressive disease, debilitated conditions and the risk factors include suppurative lesions, facial trauma, and extraction sites.⁸ Myiasis is diagnosed clinically based on presence of the maggots but it is usually not possible to identify the type of larvae without microscopic examination. It is likely that poor oral hygiene, lip incompetence and lack of patient awareness are determinant factors for infestation of larvae in this case.⁹ The standard treatment regimen for myiasis is removal of maggots, in combination with topical and systemic drugs that force the larvae out of necrotic lesion. Various chemicals such as (turpentine oil, chloroform, iodoform, phenol etc.) have been used for the treatment of myiasis.^{9,10} Ivermectin is a semi-synthetic macrolide antibiotic and its use is well documented for treatment of human parasitosis. Ivermectin was considered safe for use in humans and has also indicated in treatment of scabies and filari with neither side effects nor any toxicity.¹⁰ Thus concluding, oral myiasis is a serious and debilitating condition which is generally seen in association with necrotic and infectious wounds showing predilection amongst unhealthy patients with psychiatric disorders, diabetics and immune-compromised patients. The provision for basic sanitation and general cleanliness of dwelling areas and maintaining good oral and personal hygiene remains the primary preventive measure in most of the cases.

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