

Oral Myiasis of Mentally Challenged Child – A Case Report

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Abstract

Myiasis is a parasitic disease that affects human and other vertebrates by dipterous larvae which feed on hosts dead or living tissue. The condition is a result of neglected oral and personal care along with mental and physical challenges of patient. In our OPD we treated a 11 year old mentally challenged patients having palatal ulcer with maggots by topical application of turpentine oil and wound debridement along with systemic antibiotics and educate patients caregiver regarding importance of maintaining oral hygiene protocol .

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I. INTRODUCTION

Myiasis is a parasitic disease that affects human and other vertebrates. The term myiasis is derived from Greek words “Muia” and “iasis”, which means “fly” and “disease”, respectively. It is widely found in tropical and subtropical region. In humans the sites most commonly affected are skin, nose, ear, eyes, anus, vagina and oral cavity. ⁴Oral myiasis is associated with nosocomial infection, mouth breathing, poor oral hygiene, anterior open bite, ill-fitting uncleaned prosthesis and thumb sucking habits, incompetent lips and trauma or dental extraction.

II. CASE REPORT

A 11 year old male patient reported in our hospital with a chief complaint of ulcerated lesion at anterior palate since last 15 days which was initially smaller and increasing in size progressively patient is mentally challenged with cerebral palsy since childhood. After proper examination we found an ulcer with everted and erythematous border at maxilla involving anterior palate which is high arched, and history reveals that patient is chronic mouth breather The wound is mild tender and already some maggots visible superficially. On first day we remove some 10-15 maggots following application of turpentine oil. The wound simultaneously irrigate with 0.9% normal saline and betadine solution. The debridement of wound is done under local anesthesia and extirpated maggots are placed in a tight container and disposed later. A maxillary impression taken to make an acrylic cover plate for dressing of intraoral wound done by Sterile gauge Impregnated with Betadine. Patient was given antibiotics to cover both aerobes and anerobes along with Betadine mouth wash. This evacuation of maggots from deep to wound done every consecutive three days along with debridement and dressing. After three days oral prophylaxis was done to improve the oral hygiene. After 7 days of regular checkup and education patient came up with complete healing of palatal wound.



III. DISCUSSION

Oral myiasis is a rare condition observed in growing children and healthy adults, however this infection has frequently been reported in patients with mental illness. In addition alcoholism, senility, hemiplegia, diabetes, individuals having compromised immune system and open mouth during sleep may facilitate the development of oral myiasis.

⁴The term myiasis first proposed by Hope at 1840 to disease of humans originating specially with dipterous larvae and ²was first described by Laurence in 1909. ⁶The species was first found in animal wounds in Hong Kong in the year 2000 and the first case in humans was documented in 2003 in Hongkong. It is rarely observed in children and specially in oral cavity, more specifically in periodontal tissue. ³German entomologist Fritz Zumpt defined myiasis as the “infestation of live human and vertebrate animals with dipterous larvae, which at least for a period feed on the host dead or living tissue, liquid body substances or ingested food”. Human or animal tissue act as an intermediate host for the larvae in its life cycle. It is widely found in tropical and subtropical region. In humans the sites most commonly affected are skin, nose, ear, eyes, anus, vagina and oral cavity. ⁴Oral myiasis is associated with nosocomial infection, mouth breathing, poor oral hygiene, anterior open bite, ill-fitting uncleaned prosthesis and thumb sucking habits, incompetent lips any trauma or dental extraction.

⁴Myiasis Classification

There are two main systems of classification categorizing myiasis, anatomical and ecological classification. The anatomical system of classification first proposed by Bishopp later modified by James and Zumpt

Classification by Zumpt	Classification by Bishopp	Classification by James
Sanguinivorous	Blood sucking	Blood sucking
Dermal/subdermal	Tissue destroying subnormal migratory	Creeping Traumatic/wound/anal/vaginal
Nasopharyngeal	Infestation of head passages	Nose,mouth, sinuses, aural , ocular

Ecological classification	Description
Specific/Obligatory	Parasite dependent on host for part of its life cycle
Semispesific/Facultative	Maggots feed on necrotic tissue
Primary	Free living and may initiate myiasis
Secondary	Free living and unable to initiate myiasis, may be involved once animal is infested by other species
Tertiary	Free living and unable to initiate myiasis, may be involved when host is near death
Accidental/Pseudomyiasis	Free living larvae and not able to complete its life cycle, causes pathological reaction when accidentally in contact with the host

Ecological classification of myiasis

¹⁰Myiasis of oro-dental complex commonly caused by common Indian housefly *Musca Nebulo*. The lifecycle of Diptera fly consists of four stages egg, larva, pupa and adult fly. The commencement of the life cycle occurs with the egg laid by female fly on dead and decaying tissue. Within one day eggs hatch and the larva is released and the suitable temperature, moisture and necrotic tissue provided by open wound or ulcer give appropriate environment for this process. The stages of larva lasts for 6-8 days during which they are parasitic to human beings.

The diagnosis of myiasis is confirmed by the movement of larvae found at infection site. ¹⁰The management of oral myiasis has not any treatment protocol, however the standard treatment is to remove the larvae mechanically with or without anesthesia. The use of tropical asphyxiating drugs which forces the larvae to come out is the golden approach. Use of Turpentine oil (a tropical irritant) facilitates the removal of larvae. Other agents like ether, chloroform, iodoform, and phenol mixture can also be used. This is followed by surgical debridement to remove the necrotic tissue.

In this particular case the patient is completely dependent on his caregiver particularly to parents however the poor socioeconomic status of this patient family and lack of health education lead to neglect the oral hygiene of the patient. So the educational measure, basic sanitation and the proper medical care at health care facility as well as at home will improve the quality of life of this individuals.

IV. CONCLUSION

Myiasis may cause dangerous to the host if untreated or late diagnosed. As the old saying goes “prevention is better than cure” the disease should be prevented by controlling fly population, maintaining oral and personal hygiene and sanitation as well as good health education to the caregiver of patients. Special care need to taken to medically compromised patients as they are unable to maintain the basic oral hygiene.

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