



A CASE REPORT OF ORAL MYIASIS-MAGGOTS IN ORAL CAVITY

Rahul VC Tiwari^{1,.}, Philip Mathew^{2,.}, Raja Satish Prathigudupu^{3,.}, Jisha David⁴ and Heena Tiwari⁵

^{1,2,4}Department of Oral &Maxillofacial Surgery and Dentistry, Jubilee Mission Medical College Hospital and Research Institute, Thrissur, Kerala, India

³Sibar Institute of Dental Sciences, Guntur, Andhra Pradesh, India

⁵Department of Dentistry, Government Dental Surgeon, CHC Makdi, Kondgaon, C.G., India

ARTICLE INFO

Article History:

Received 9th October, 2017

Received in revised form 10th

November, 2017

Accepted 26th December, 2017

Published online 28th January, 2018

Key words:

Oral Myiasis, Dipteria Species, Parasites, Maggots, Ivermectin

ABSTRACT

Oral Myiasis is an uncommon malady caused by hatchlings of certain dipteran flies. It is generally detailed in creating nations and in the tropics. In this, a case of oral myiasis in the maxillary foremost area of a 74-year-old rationally tested female is being accounted for. The myiasis was caused by the hatchlings of *Chrysomya bezziana* species. The clinical findings are introduced. Etiology and the significance of oral wellbeing in unique individuals are additionally talked about. Catchphrases: *Chrysomya bezziana*, fly hatchlings, myiasis. The term myiasis is connected to the harmful activity that hatchlings of certain Diptera cause in vertebrate creatures by developing in living or dead tissue. In light of its incredible dangerous potential, suitable and preventive treatment is important. Oral myiasis is an uncommon pathology in people and is related with poor oral cleanliness, liquor addiction, infirmity, suppurating injury, serious halitosis, and other conditions. We have displayed an instance of oral myiasis in a simple-minded patient. Reviewing the writing uncovered that the greater part of the cases included the front piece of the oral cavity of male patients living in creating or immature nations and furthermore that inclining factors perpetually went with pervasion.

Copyright©2018 **Rahul VC Tiwari et al.** This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

Oral myiasis has been a once in a while portrayed condition, even despite the fact that it was first said in writing by Laurence in 1909 [1]. Myiasis is a pervasion of living people and vertebrate creatures with dipterous hatchlings which, at any rate for a time, eat living or dead host tissue, fluid body substances, or undigested sustenance. Myiasis oftentimes happens in rustic territories, influencing domesticated animals and pets, for example, puppies and felines. In people, it wins typically in undesirable people principally from creating and immature nations. Oral myiasis has been a once in a while portrayed condition, even despite the fact that it was first said in writing by Laurence in 1909 [1]. Myiasis is a pervasion of living people and vertebrate creatures with dipterous hatchlings which, at any rate for a time, feast upon living or dead host tissue, fluid body substances, or undigested nourishment. Myiasis much of the time happens in country zones, influencing animals and pets, for example, mutts and felines. In people, it wins as a rule in undesirable people for the most part from creating and immature nations [2-4] and phenomenally in the western created world [5].

*Corresponding author: **Rahul VC Tiwari**

Department of Oral &Maxillofacial Surgery and Dentistry, Jubilee Mission Medical College Hospital and Research Institute, Thrissur, Kerala, India

Numerous cases go unreported because of "social, social furthermore, medico-political reasons" [6]. Myiasis is caused by individuals from the Muscidae fly family that lay eggs or hatchlings on nourishment, necrotic tissue, open injuries, unbroken skin, or mucosa. The order of myiasis is in light of their restriction on the host body (dermal, subdermal, nasopharyngeal, interior organs, and urogenital [7]) or, in parasitological terms, on the sort of host-parasite relationship (required, facultative, or pseudomyiasis). Clinically, they can likewise be named essential myiasis caused by biophagous hatchlings sustaining on living tissue and is uncommon in people. The most regular write in people is the auxiliary assortment caused by necrobiophagous flies sustaining on dead tissue in a necrotic cavity or sore [8, 9]. Contingent on the state of included tissue, myiasis can likewise be grouped into incidental (hatchlings ingested alongside the sustenance), semispecific (hatchlings laid on necrotic tissue in wounds), and compulsory (hatchlings influencing the undamaged skin). In this article, we have evaluated oral myiasis via hunting PubMed down productions. Just articles with adequate data and information are evaluated here to reach any determinations. A case report is exhibited to draw consideration towards disregard of these patients in poor financial classes. The term Myiasis initially got from a Latin word (Myia significance Fly and iasis meaning illness) [1, 2] was authored by Hope in 1840 and was first depicted by Lawrence in 1909. [2] It is an

obsessive condition portrayed by pervasion of living tissues of people or creatures by Diptera hatchlings. These hatchlings feast upon living or dead necrotic tissue of the host and create as parasites. [2] Human myiasis is uncommon and has been generally experienced in locales with warm and sticky atmosphere [3]. Clinically myiasis has been grouped into essential and auxiliary myiasis relying upon whether they eat living or dead tissue. [4, 5] They can likewise be grouped into compulsory and facultative write contingent upon the condition of the included tissue. [6] Eighty distinct types of diptera have been known to attack people and may influence distinctive parts of human body like eyes, ears, nose, vagina, skin. Be that as it may, oral contribution is extremely uncommon. [3]

CASE REPORT

We report an instance of oral Myiasis in a 74 year old female patient who was bed ridden due to paralysis since 3 months. Nasogastric tube was present when the patient was brought to hospital; with chief complaint of Hematemesis. She had four episodes of blood vomiting. Emergency blood investigations were performed. Patient was known case of Type 2 diabetes mellitus, hypertension, coronary artery disease and peptic ulcers. On oral examinations oral myiasis was diagnosed as maggots were present in the maxillary gingiva and periodontium. Severe halitosis was present with chronic generalized periodontitis. All the teeth were mobile. On examination, it was noticed that few parasites were looking from inside a horrible injury, situated in the foremost maxillary vestibule locale (Fig.1 & Video.1).



Fig 1 Lesion area and slimy parasite (maggots) invasion to pervasion by flies.



Fig 2 Extracted hatchlings

All in all, oral cleanliness was poor with inept lips and mouth relaxing. The patient lived in unhygienic conditions, frequently kept in the open close creatures and unattended. Utilizing a suffocation method with turpentine oil, the extraction of living parasites was finished with tweezers and hydrogen peroxide

irrigation under nearby anesthesia (Fig. 2). The injury was debrided, watered with typical saline, and shut on the second day after investigation. The parasitological report distinguished the hatchlings as *Musca domestica* or then again basic housefly. The patient was taken after for 3 months, furthermore, no new scene was seen. At the point when the tissues of the oral depression are attacked by the parasitic hatchlings of flies, the oral pathologist names this condition oral myiasis. The frequency of oral myiasis contrasted with that of cutaneous myiasis is low as oral tissues aren't for all time presented to the outer condition. No less than 86 unique types of Diptera can contaminate man with hatchlings that attack skin and body pits [10]. Substance flies exist worldwide and are found in an assortment of natural conditions, and the historical backdrop of movement to an endemic region by a sound individual ought to be remembered while making a conclusion. The quantity of hatchlings exhibit in different reports ranges from few [2] to numerous [11- 16] depending on suitable eggs kept by flies which might be in the range of a couple of hundreds. This thusly will decide the degree of have harm. The fly can straightforwardly lay eggs on its host or convey them to the host by laying them on a vector, for example, a bloodsucking arthropod. Warm and sticky states of the tropics and subtropics with poor cleanliness and absence of restorative care enable flies to breed unreservedly and target vulnerable people uninhibitedly. This issue can be distinguished as the dominant part of these reports are from creating [2, 10- 21] nations and less for created [22, 23] countries. The life cycle of *M. domestica* begins with a female fly laying up to 500 eggs in a few clumps of around 75 to 150 eggs. Eggs bring forth inside 10- 24 h in warm climate. The legless slimy parasites feast upon decaying tissues and go through three instars to achieve full size in 5 days. The develop hatchlings are 3 to 9 mm long, smooth white in shading, barrel shaped, with a decreasing head. The completely created hatchling takes off the tissues to locate a cooler drier condition in which to pupate. The pupal stage for the most part keeps going a further 5 days. The developing fly departs from the pupal case using a then again swelling and contracting sac, called the ptilinum on the front of its head, which it utilizes like a pneumatic pound [24]. Albeit all age gatherings might be influenced, the harm caused to newborn children is more genuine and might be deadly [4, 23- 28]. A large portion of the distributed reports included male patients most likely because of poor oral cleanliness, disregard, expanded open air work, or go to endemic zones when contrasted with females [10, 13- 17, 19, 20, 23]. Likewise, the foremost piece of the oral cavity was more ordinarily influenced than the back since it is effectively open to flies [2, 10- 16, 18- 23, 25]. Oral myiasis is extremely uncommon in solid developing kids and grown-ups [4]; the vast majority of the cases depicted in writing were auxiliary to medicinal or anatomical conditions, for example, malnourished patients [17], disregarded breaks [20], cerebralpalsy [8], mouth breathing [14, 15], foremost open nibble [14, 25], cancrum oris [17], poor oral cleanliness [12, 14, 16, 18- 21, 25], mechanical ventilation [29], tolerant experiencing radiotherapy [30], individual living in closeness to creatures [10], and weakened patient with disregard of nursing or custodial faulty [31]. The female patient for our situation was slow-witted with extremely poor oral cleanliness and mouth breathing propensity. No doubt, she experienced undiscovered injury, and absence of care in a fly-inexhaustible condition drove.

DISCUSSION

Oral Maxillofac Surg (2014) 18:25- 29 27stage can counteract inclusion of more profound tissues. This is particularly imperative in people with a low financial level that might be ignorant of the oral injuries [19, 25, and 32]. Additionally, an absence of standard oral care in these patients may make the injuries go unnoticed until the point when broad contribution happens. Despite the fact that myiasis might act naturally restricting and nonfatal in a few cases, the patient and relatives report with gigantic mental misery. Barely any hatchlings can decimate crucial tissues, initiating genuine or even dangerous drain [11]. Surgical debridement of the injury and extraction of hatchlings are most ordinarily done under neighborhood sedative or general anesthesia. The impediment or suffocation approach powers vigorous hatchlings to surface looking for air where they can be expelled with the guide of forceps or tweezers [33]. A portion of the operators that have been used to suffocate are oil jam, overwhelming oil, beeswax, crude meat, mineral oil, nail clean, sticky tape, margarine, biting gum, turpentine oil [20], whitehead varnish [22], local tobacco leaf [33], chloroform, and ether [34]. In our patient, we utilized a cotton bud impregnated with turpentine oil which was put at the opening of the attachment for around 10 min, compelling the hatchlings to rise to the top looking for oxygen, making extraction simple. Optional contamination of the injury by microorganisms is unprecedented on account of the bacteriostatic action in the gut of hatchlings, avoiding unwanted abundance of pyogenic microscopic organisms [35]. Fundamental anti-infection agents are just essential at the point when optional disease is known to be available [22, 25]. As of late, topical and oral ivermectin have been utilized against slimy parasites in people [14-16]. Ivermectin is a semisynthetic macrolide given orally in only a solitary measurements of 150- 200 µg/kg body weight. It is expected that ivermectin squares nerve driving forces to the nerve endings through the arrival of gamma aminobutyric corrosive, connecting to the receptors furthermore, causing paralysis and passing of slimy parasites. As indicated by Rossi-Schneider et al. [14], human myiasis counteractive action includes fly populace control, general tidiness, and advising the general population that people living in areas without essential sanitation are more inclined to pervasion.

CONCLUSION

Restricting myiasis specifically identifies with controlling the fly populace by effective waste Transfer supplemented by showering with a bug spray, furnishing the patient with a physical boundary, and great faculty and nursing care. Visualization, when there are no confusions, is great. In spite of the fact that this isn't a deadly issue, information of this invasion is fundamental for a preventive, demonstrative, and therapeutic point of view. Restorative work force managing defenseless patients must teach the patient, relatives, and overseers about preventive measures.

References

1. Laurence SM (1909) Dipterous larvae infection. *BMJ* 9:88
2. Erfan F (1980) Gingival myiasis caused by Diptera (Sarcophaga). *Oral Surg Oral Med Oral Pathol* 49:148-150
3. Shah HA, Dayal PK (1984) Dental myiasis. *J Oral Med* 39:210-211
4. Lim ST (1974) Oral myiasis: a review. *Singapore Dent J* 13:33-34
5. Konstantindis AB, Zamanis D (1987) Gingival myiasis. *J Oral Med* 42:243-245
6. Lukin LG (1989) Human cutaneous myiasis in Brisbane. A prospective study. *Med J Aust* 150:237
7. Ogbalu OK, Achufusi TG, Adibe C (2006) Incidence of multiple myiasis in breasts of rural women and oral infection in infants from the human warble fly larvae in the humid Tropic-Niger Delta. *Int J Dermatol* 45:1069-1070
8. Rey L (1991) *Paraasitologia*, 2nd edn. Editora Guanabara Koogan, Rio de Janeiro
9. Ribeiro FAQ, Pereira CSB, Alves A, Marcon MA (2001) Ratamento da mlfase humana cavitaria com ivermectina oral. *Rev Bras Otorrinolaringol* 67:755-761
10. Hakimi R, Yazdi I (2002) Oral mucosa myiasis caused by *Osterus ovis*. *Arch Iranian Med* 5:194-196
11. Shinohara EH, Martini MZ, Oliveira Neto HG, Takahasi A (2004) Oral myiasis treated with ivermectin: case report. *Braz Dent J* 15:79-81
12. Gomez RS, Perdigão PF, Pimenta FJ, Rios Leite AC, Tanosde Lacerda JC, Custódio Neto AL (2003) Oral myiasis by screw worm *Cochliomyia hominivorax*. *Br J Oral Maxillofac Surg* 41:115-116
13. Bozzo L, Lima IA, de Almeida OP, Scully C (1992) Oral myiasis caused by Sarcophagidae in an extraction wound. *Oral Surg Oral Med Oral Pathol* 74:733-735
14. Rossi-Schneider T, Cherubini K, Yurgel LS, Salum F, Figueiredo MA (2007) Oral myiasis: a case report. *J Oral Sci* 49:85-88
15. Gealh WC, Ferreira GM, Farah GJ, Teodoro U, Camarini ET (2009) Treatment of oral myiasis caused by *Cochliomyia hominivorax*: two cases treated with ivermectin. *Br J Oral Maxillofac Surg* 47:23-26
16. Abdo EN, Sette-Dias AC, Comunian CR, Dutra CE, Aguiar EG (2006) Oral myiasis: a case report. *Med Oral Patol Oral Cir Bucal* 11:E130-E131
17. Aguiar AM, Enwonwu CO, Pires FR (2003) Noma (cancrum oris) associated with oral myiasis in an adult. *Oral Dis* 9:158-159
18. de Souza BT, Salvitti Sá Rocha RA, Guirado CG, Rocha FJ, Duarte Gavião MB (2008) Oral infection by Diptera larvae in children: a case report. *Int J Dermatol* 47:696-699
19. Bhatt AP, Jayakrishnan A (2000) Oral myiasis: a case report. *Int J Paediatr Dent* 10:67-70
20. Lata J, Kapila BK, Aggarwal P (1996) Oral myiasis. A case report. *Int J Oral Maxillofac Surg* 25:455-456
21. Sharma J, Mamatha GP, Acharya R (2008) Primary oral myiasis: a case report. *Med Oral Patol Oral Cir Bucal* 13:E714-E716
22. Ng KH, Yip KT, Choi CH, Yeung KH, Auyeung TW, Tsang AC, Chow L, Que TL (2003) A case of oral myiasis due to *Chrysomya bezziana*. *Hong Kong Med J* 9:454-456
23. Droma EB, Wilamowski A, Schnur H, Yarom N, Scheuer E, Schwartz E (2007) Oral myiasis: a case report and literature review. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 103:92-96

24. Roszalina R, Rosalan R (2002) Oral myiasis: case report. *Malaysian J Med Sci* 9:47-50
25. Al-Ismaily M, Scully C (1995) Oral myiasis: report of two cases. *Int J Paediatr Dent* 5:177-179
26. Oral Maxillofac Surg (2014) 18:25-2926. Zumpt F (1965) Myiasis in man and animals in the old world. In: Zumpt F (ed) A textbook for physicians, veterinarians and zoologists. Butterworth and Co. Ltd, London, p 109
27. Schreiber MM, Suhuekmell N, Sampsell J (1964) Human myiasis. *JAMA* 188:828-829
28. Koh TH (1999) A case report and a role of the internet. *J Perinatol* 19:528-529
29. Yoshitomi A, Sato A, Suda T, Chida K (1997) Nasopharyngealmyiasis during mechanical ventilation. *Nihon Kyobu ShikkanGakkai Zassi* 35:1352-1355
30. Chung Y, Jung B (2001) Nosocomial submandibular infections with dipterous fly larvae. *Kor J Parasitol* 34:255-260
31. Greenburg (1984) Two cases of human myiasis caused by *Phaenicia sericata* (Diptera Calliphoridae) in Chicago area hospitals. *J Med Entomol* 21:615
32. Dhooria HS, Badhe AG (1984) Oral myiasis: a case report. *J Indian Dent Assoc* 56:25-27
33. Hubler W, Rudolf A, Dougherty E (1974) Dermal myiasis. *Arch Dermatol* 10:109-110
34. Felices RR, Ogbureke KU (1996) Oral myiasis: report of case and review of management. *J Oral Maxillofac Surg* 54:219-220
35. Mac Namara A, Durhan S (1997) *Dermatobia hominis* in the accident and emergency department: "I've got you under my skin". *J Accid Emer Med* 14:179-180

How to cite this article:

Rahul VC Tiwari *et al* (2018) 'A Case Report of Oral Myiasis-Maggots in Oral Cavity', *International Journal of Current Advanced Research*, 07(1), pp. 9457-9460. DOI: <http://dx.doi.org/10.24327/ijcar.2018.9460.1564>
