



Oral Myiasis (*Chrysomya Bezziana*): Its Cause, Clinical Feature And Management

Dr. Sai Lavanya Pasula^{1*}, Dr. Rooposhi Saha², Dr. Milind Rajan³, Dr. Maheen Shaikh⁴, Dr. Yusuf Chunawala⁵, Dr. Bhooshit Rupesh Choksi⁶

^{1*}Bds, Private Practitioner, Hyderabad, Telangana

²Professor, Department of Pedodontics and Preventive Dentistry, M A Rangoonwala College of Dental Science and Research Centre, Azam Camp, Pune

³Assistant Professor, Department of Pedodontics and Preventive Dentistry, M A Rangoonwala College of Dental Science and Research Centre, Azam Campus, Pune

⁴Assistant Professor, Department of Pedodontics and Preventive Dentistry, M A Rangoonwala College of Dental Science and Research Centre, Azam Campus, Pune

⁵Professor & HOD, Department of Pedodontics and Preventive Dentistry, M A Rangoonwala College of Dental Science and Research Centre, Pune

⁶BDS, Dental Hygiene, Aplus Institute of Dental Hygiene, North York, Toronto, Canada

***Corresponding Author: Dr. Sai Lavanya Pasula**

*30-52/5/4, Ramanuja Nilayam, Ground Floor, Creative Nagar, Ganesh Nagar, Degaon road, AS Rao Nagar, 500062

ABSTRACT

Oral myiasis, caused by the infestation of dipteran larvae, particularly *Chrysomya bezziana*, is a rare yet significant condition that poses challenges in its management. The infestation of live maggots in the oral cavity can lead to tissue destruction, secondary infections, and psychological distress. Prompt recognition and a multidisciplinary approach involving larvae removal, wound debridement, antibiotic therapy, oral hygiene education, and psychological support are essential in addressing this condition. In addition, addressing the underlying factors contributing to poor oral hygiene and infrequent dental care is crucial in preventing the recurrence of oral myiasis. This review underscores the importance of collaborative efforts among healthcare professionals, public health initiatives, and community education programs to raise awareness and promote preventive measures against oral myiasis caused by *Chrysomya bezziana*.

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Introduction:

Oral myiasis is a rare but notable condition characterized by the infestation of live maggots (larvae of flies) in the orally exposed regions of the human body. The condition is mainly caused by the infestation of dipteran larvae, particularly *Chrysomya bezziana*, which is a common cause of myiasis in tropical and subtropical

regions. This condition is generally associated with poor oral hygiene, open wounds, and infrequent dental care.¹

F. W. Hope originally described myiasis in 1840. The word myiasis comes from the Greek words "myia," which means fly, and "asis," which means disease. Dipterous larvae that feed on the host's dead or living tissues, liquid bodily fluids, or swallowed food are the cause of myiasis. Myiasis is a disease that commonly affects cattle in rural regions and sick people in third-world countries. Because oral tissues are not constantly exposed to the outside world, the incidence of oral myiasis is much lower than that of cutaneous myiasis.²⁻⁴ Oral myiasis cases have been linked to dental extractions, nosocomial infections, drug addiction, trips to tropical countries, mental health patients, and conditions like senility, alcoholism, mental retardation, and mouth breathing during sleep, which are known to cause prolonged mouth opening. When food detritus ferments or oral hygiene is ignored, foul breath attracts flies. The adult fly deposits its eggs more easily when its mouth is open, and India's subtropical environment is ideal for its reproduction.⁵

This review underscores the importance of collaborative efforts among healthcare professionals, public health initiatives, and community education programs to raise awareness and promote preventive measures against oral myiasis caused by *Chrysomya bezziana*.

Risk Factors: The infestation of *Chrysomya bezziana* larvae in the oral cavity typically occurs in individuals with poor oral hygiene and predisposing factors such as open wounds, oral ulcers, gangrene, or necrotic tissues. Patients with psychiatric disorders, neurological impairment, or debilitating conditions that limit their ability to maintain oral hygiene are also at a higher risk of developing oral myiasis. Additionally, individuals living in rural areas with limited access to dental care and inadequate sanitation facilities may face a higher risk of infestation by *Chrysomya bezziana* larvae.⁶

Causes of Oral Myiasis: Oral myiasis is predominantly caused by the infestation of the screwworm fly, *Chrysomya bezziana*. The adult female flies lay their eggs in wounds, on infected tissues, or in regions with poor hygiene. Once the eggs hatch, the larvae thrive on the surrounding tissue, causing significant damage and potential secondary infections.⁶

Clinical Features of Oral Myiasis: The clinical presentation of oral myiasis caused by *Chrysomya bezziana* can be distressing and may vary depending on the severity of the infestation. Common signs and symptoms may include the sensation of movement in the mouth, localized pain, foul odor, presence of live maggots, and tissue destruction. Patients with oral myiasis often report a history of poor oral hygiene, untreated wounds, or neglected dental care. The psychological impact of oral myiasis can be profound, leading to anxiety, embarrassment, and social isolation.⁷

Consequences of Oral Myiasis: The consequences of oral myiasis can be quite serious. First and foremost, the presence of maggots in the mouth can cause significant pain and discomfort. The larvae feed on the surrounding tissues, leading to inflammation, infection, and in severe cases, tissue destruction. This can lead to difficulty eating, speaking, and performing other basic oral functions.

In addition to physical discomfort, oral myiasis can have significant psychological effects on the individual affected. The presence of maggots in the mouth can be extremely distressing and can lead to feelings of shame, embarrassment, and social isolation. The individual may also experience anxiety and depression as a result of the condition.

Furthermore, oral myiasis can lead to serious complications if left untreated. Infections caused by the infestation can spread to other parts of the body, leading to systemic illness. In severe cases, the damage caused by the infestation may require surgical intervention to remove damaged tissue and promote healing.

It is important to seek medical attention promptly if oral myiasis is suspected, in order to minimize the potential consequences and ensure appropriate treatment.^{1,3}

Management of Oral Myiasis: The management of oral myiasis caused by *Chrysomya bezziana* requires a multidisciplinary approach involving dental surgeons, oral and maxillofacial surgeons, and other healthcare professionals. The primary goals of management include removing the larvae, controlling secondary infections, and addressing the underlying factors contributing to the infestation.⁸

Larvae Removal: The immediate removal of live maggots from the affected area is a crucial step in the management of oral myiasis. This can be achieved through meticulous inspection, manual removal using

forceps, and irrigation with saline or antiseptic solutions. Careful debridement of necrotic tissue and wound cleaning is essential to prevent reinfestation.⁹

Wound Debridement and Dressing: Following larvae removal, thorough wound debridement and irrigation are necessary to remove dead tissue and foreign material. Antiseptic dressings are applied to manage the wound and prevent secondary infections. In more severe cases, surgical debridement and reconstruction may be required to restore tissue integrity and promote healing.⁹

Antibiotic Therapy: Antibiotic therapy is often indicated to manage secondary bacterial infections resulting from oral myiasis. Empirical broad-spectrum antibiotics are commonly prescribed, and tailored antimicrobial therapy may be implemented based on culture and sensitivity results.¹⁰

Oral Hygiene and Preventive Measures: Educating patients about the importance of oral hygiene, wound care, and regular dental check-ups is essential in preventing recurrent cases of oral myiasis. Proper oral hygiene practices, including brushing, flossing, and the use of antiseptic mouth rinses, should be emphasized.¹¹

Psychological Support: Patients with oral myiasis may experience significant psychological distress and stigma. Providing psychological support, counseling, and reassurance can help alleviate anxiety and restore confidence in affected individuals.

In addition to these measures, addressing the underlying factors contributing to poor oral hygiene, such as socioeconomic status, access to healthcare, and education, is critical in preventing the recurrence of oral myiasis caused by *Chrysomya bezziana*.^{5,6}

Preventive Measures and Public Health Initiatives: In addition to the management of individual cases, preventive measures play a pivotal role in mitigating the risk of oral myiasis caused by *Chrysomya bezziana*. Public health initiatives aimed at promoting oral hygiene, access to dental care, and sanitation facilities in at-risk communities can contribute significantly to preventing the occurrence of this condition. Community education programs regarding the importance of maintaining oral hygiene, seeking timely dental care, and addressing predisposing factors such as oral ulcers and wounds can raise awareness and empower individuals to take proactive measures to prevent oral myiasis. Furthermore, collaboration between healthcare professionals, community health workers, and local authorities can facilitate the implementation of targeted interventions to reduce the burden of oral myiasis in endemic regions.^{11,12}

Conclusion:

In conclusion, oral myiasis caused by *Chrysomya bezziana* is a distressing condition that requires prompt recognition and management. The infestation of live maggots in the oral cavity can lead to significant tissue destruction, secondary infections, and psychological distress. A comprehensive management approach involving larvae removal, wound debridement, antibiotic therapy, oral hygiene education, and psychological support is essential in addressing this condition. Furthermore, addressing the underlying factors contributing to poor oral hygiene and infrequent dental care is paramount in preventing the recurrence of oral myiasis. Collaborative efforts among healthcare professionals, public health initiatives, and community education programs are necessary to raise awareness and promote preventive measures against oral myiasis caused by *Chrysomya bezziana*.

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