

## Case Report

### Fixed Partial Denture associated maggots: A case report of oral myiasis

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#### ABSTRACT:

Oral Myiasis is a rare condition that results in invasion of tissue by the larvae of fly. Myiasis is an infestation of a live vertebrate by dipterous larvae, which at least for a time, feed on living, or dead host tissue, liquid body substances, or undigested food. We have presented the case report of a 67-year-old male patient presented with the complaint of a crawling sensation in his mouth for the previous six months. The patient gave history of wearing crowns for more than two years. . Manual removal of the maggots was done followed by cleaning and treating with topical and systemic antiseptics, anti-fungal and analgesics. Patient was put on follow-up and was instructed to maintain strict oral hygiene.

**Key words:** Fixed Partial Denture, Maggots, Oral Myiasis

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#### INTRODUCTION

The term myiasis is derived from Latin word "muia" which means fly and "iasis" means disease (In Greek: Myi means mosca) refers to infestation of living tissues of animals or humans by diptera larvae. It was first coined by The Reverend Frederick William Hope. Even though the term myiasis was first used in 1840, such conditions have been known since ancient times.<sup>1</sup> Ambroise Paré, the chief surgeon to King Charles IX and King Henry III, observed that maggots infested open wounds. Zumpt defined myiasis as the infestation of live human and vertebrate animals by dipterous larva, which at least for a certain period feed on host's dead or living tissue, liquid body substances or ingested food in unhealthy individuals frequently found in the third world countries.<sup>2, 3</sup>

Improved quality of life (QoL), together with a decline in mortality rates, has led to the growth of the elderly population worldwide. Several studies have failed to show strong correlations between either patient satisfaction with their prosthesis . In India, being a developing country and having a huge population, there is a lack of awareness and management of the prosthesis and the rehabilitation of prosthesis patients.

#### CASE REPORT

A 67-year-old male patient presented with the complaint of a crawling sensation in his mouth for the previous six months. He believed that the sensation was caused by numerous small worms inhabiting feeding on his oral tissues. His medical history was remarkable and he was suffering from Diabetes Mellitus, Hypertension and he had a cardiac ailment also. Extra-oral examination was unremarkable and the patient denied any similar sensation elsewhere in his body. Intra-oral examination revealed a number of maggots from labial vestibule of upper left central incisor to the adjacent region of second molar (Fig. 1). Relevant investigations, including complete blood count, hepatitis serology, vitamin B12, thyroid function, blood sugar, brain MRI, and allergy tests, were within controlled range. Patient had a fixed prosthesis extending from maxillary right central incisor to left canine. Patient was morbid obese, his buccal pad of fat on both sides of cheek regions hinder the cleaning of the buccal region of maxillary left quadrant teeth, for that reason his oral hygiene was compromised leading to inefficient tooth brushing. Multiple ailments in the patient led to compromise in the manual dexterity and patient was unable to efficiently do tooth brushing. The patient was treated by manual removal of the maggots with the help of clinical forceps and by application of turpentine oil

followed by cleaning and treating the region with topical and systemic antiseptics, anti-fungal and analgesics. Patient was put on follow-up and was instructed to maintain strict oral hygiene. After two days the region was explored, more maggots were found posteriorly and removed again in same manner. After few days the region was examined again and there were no maggots and region healed progressively (Fig.2).



Fig 1: Patient with presence of maggots



Fig 2: After maggots removed.

## DISCUSSION

Oral myiasis is a rare condition that results in invasion of tissue by the larvae of fly. Myiasis is an infestation of a live vertebrate by dipterous larvae, which at least for a time, feed on living, or dead host tissue, liquid body substances, or undigested food. Myiasis occurs in rural areas, infecting bovid mammals, and in humans prevail in unhealthy individuals in third world countries. The life cycle of dipteran fly, from egg to adult, may take as short as 1 week, but normally requires 3 weeks for completion. The fertile female fly lay eggs and after 12-24 hours (in summer) the first formed larvae hatch. They enter the living tissues and feed for 5-7 days. The larvae exuviate twice during this period and in the third instar (last stage), ceases to eat.

They leave the host to pupate inside the ground and the adult fly emerges after 1-2 weeks.<sup>7-9</sup> In the present manuscript, we have described the case of a 67 year old male patient with the presence of maggots.

A 67-year-old male patient presented with the complaint of a crawling sensation in his mouth for the previous six months. He believed that the sensation was caused by numerous small worms inhabiting his prosthesis and feeding on his oral tissues. Intra-oral examination revealed healthy oral tissues with bad oral hygiene including chronic gingivitis, chronic periodontitis and gingival bleeding and halitosis. However; the patient gave history of prosthesis for two years with cleaning. Relevant investigations, including complete blood count, hepatitis serology, vitamin B12, thyroid function, blood sugar, brain MRI, and allergy tests, were within normal range. Numerous maggots were seen in the left anterior and posterior region of maxilla. The best treatment modality is manually removal of the maggots followed by cleaning and treating with topical antiseptics, anti-fungal and analgesics. Patient was put on follow-up and was instructed to maintain strict oral hygiene. In a case report described by Hassona Y, authors reported the of a 58-year-old lady who presented with the complaint of a crawling sensation in her mouth for the previous six months. She believed that the sensation was caused by numerous small worms inhabiting her complete denture and feeding on her oral tissues. One week after the initial assessment the patient brought a small envelope containing cloth fibres believing these fibres to be the worms inhabiting her denture and eating her oral tissues.<sup>10</sup>

The incidence of oral myiasis is rare, even in developing countries. The predisposing factors include severe halitosis and factors that favour persistent non-closure of the mouth. Cases of oral myiasis have been reported to occur following dental extraction, nosocomial infection, in drug addicts, following visits to tropical countries, and in psychiatric patients. Myiasis is not uncommonly seen in chronic putrid lesions of the mouth such as the squamous cell carcinoma especially during the late stage.<sup>11</sup> Sharma D et al presented a case of gingival myiasis in the maxillary anterior region on the palatal surface in a 21-year-old mentally challenged male with moderate periodontitis and neurologic deficit. The diagnosis was made on the presence of larvae in the lesion. Treatment done was a manual removal of the larvae, one by one, with the help of the clinical forceps, surgical debridement of the oral wound, and subsequent management of the periodontal disease.<sup>12</sup>

## CONCLUSION

Myiasis of orofacial region can be prevented by educating the people from rural areas and low socio-economic groups about personal hygiene, taking care of any wound, control of fly population, and maintenance of sanitation of the surroundings.

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