International Journal of Otorhinolaryngology and Head and Neck Surgery
Shivpuri A et al. Int J Otorhinolaryngol Head Neck Surg. 2018 May;4(3):833-835
http://www.ijorl.com
pISSN 2454-5929 | eISSN 2454-5937

DOI: http://dx.doi.org/10.18203/issn.2454-5929.ijohns20181880

Case Report

Oral myiasis: a rare case comprising of more than 100 maggots

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Received: 12 January 2018
Accepted: 01 March 2018

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ABSTRACT

Oral myiasis is a rare condition caused due to larvae infestation within the oral cavity. This can be caused by several species of fly larvae and is usually secondary to severe uncontrolled physical or mental illness. Common predisposing factors for oral myiasis are incompetent lips, poor oral hygiene, anterior open bite, mouth breathing, facial trauma and oral carcinoma in a mentally challenged patient. In this case report we describe a case of oral myiasis of the anterior palate in a hemiplegic patient harbouring more than 100 larvae.

Keywords: Oral myiasis, House fly, Necrosis

INTRODUCTION

Myiasis is defined as "the infestation of live human and vertebrate animals with dipterous larvae, which, at least for a certain period, feed on the host's dead or living tissue, liquid body substances, or ingested food". Oral myiasis is extremely rare in developed countries however several cases have been reported in developing countries like India. The most common anatomic sites on the face include the nose, eye, ear and the mouth.[1,2]

In this article we present a case of oral myiasis in the anterior right palatal region of a hemiplegic patient that had more than 100 live larvae.

CASE REPORT

A 60 years old female patient was referred to us for assessment of an intraoral necrotic lesion. The patient was a known diabetic and was hemiplegic. The patient's relatives stated that this condition started just a few days back. There was no history of any kind of trauma or any evident previous lesion. On general physical examination patient was malnourished and anaemic. Intra oral examination revealed presence of necrotic and ulcerative lesion on the anterior palate, extending from incisors to first molar region (Figure 1). Lesion was painful and was accompanied by foul odour. Due to hemiplegia the patient had incompetent lips with poor oral hygiene. Necrotic lesion was cleaned with 10% hydrogen peroxide. On manipulation of tissue, several larvae were seen moving inside the lesion. These larvae were greyish-white in colour and varied from 3 to 5 mm in length (Figure 2). Whole of anterior right hard palate was infected with larvae, causing separation of mucoperiosteum from underlying bone, and the whole mass was hanging down from the roof of the oral cavity. With all these clinical findings the patient was diagnosed as oral myiasis and was hospitalized. Broad spectrum antibiotics and analgesics were prescribed for 5 days along with Ivermectin (6 mg) single dose was administered for 3 consecutive days. After proper preparation the patient was taken up for debridement under general anaesthesia and the wound was cleaned by 10% hydrogen peroxide and dabbed with turpentine oil to flush the larvae out which were manually removed with the help of serrated tweezers (Figure 3). A Total of approximately 100 larvae were removed from the oral cavity (Figure 4). After removal of larvae, the wound was irrigated and cleaned with iodine solution, and necrotic tissue was removed. An acrylic retainer was fabricated to keep mucoperosteum in position for uneventful healing.

Healing was good and the patient was discharged after a week.

Figure 1: Necrotic and ulcerative lesion on the anterior palate.

Figure 2: Greyish-white larvae varying from 3 to 5 mm in length.

Figure 3: Larvae manually removed with the help of serrated tweezers.

Figure 4: Approximately 100 larvae were removed from the oral cavity.

DISCUSSION

Oral myiasis was first described by Laurence in 1909 and the term is derived from the Latin word 'myia' which means fly and 'iasis' means disease. Myiasis is caused by larvae of flies belonging to families of Diptera, the Oestridae, Calliphordae and Sarcophagidae. [3] Musca Nebulo is the commonest Indian housefly. They are very active during summer and rainy season. In oral myiasis the flies are attracted to the foul odour due to neglected oral hygiene. These flies lay eggs that hatch to become larvae in less than a week and the larvae then turn into adult flies in about six weeks. After hatching, the larvae seek a favourable warm and moist environment to grow. The periodontal pocket in the oral cavity fulfils these requirements for survival of the larvae and also gives mechanical protection to them.[4,5] The larvae dig deeper into the soft issues by digging tunnels or separating the gingiva and periosteum from the bone. Predisposing factors for development of oral myiasis are usually anterior open bite, mouth breathing, and neglected facial fractures in patients with serious mental disability, cerebral palsy or hemiparesis. Clinically, they can be classified as primary and secondary. Primary myiasis is caused by biophagous larvae (feed on living tissue) while Secondary myiasis is caused by the necrobiophagous flies (feed on dead tissue). Depending upon condition of involved tissues it may be: (a) accidental myiasis – in which the larvae get ingested along with food (b) semi-specific myiasis – in which the larvae are laid on necrotic tissue of the wound c) obligatory – that require living tissue for larvae development (d) facultative – that require necrotic tissue for flies to lay eggs. Based on anatomic site, it can be classified as: (a) cutaneous myiasis, (b) myiasis of external orifices (c) myiasis of internal organs.[6,7] The clinical manifestations of myiasis infestation include inflammatory and allergic reactions associated with larvae. The treatment of myiasis comprises of systemic and local approaches. Systemic treatment includes broad-spectrum antibiotic such as ampicillin and amoxicillin, especially when the wound is secondarily infected. Ivermectin is a semi-synthetic

macrolide antibiotic, has been indicated for the treatment of filaria, scabies and strongyloidosis in humans and is given orally in just one dose of 150‑200 mg/kg. Ivermectin blocks the nerve impulses on the ending nerve through the release of gamma aminobutyric acid (GABA), linking to the receptors, and causing death of the parasite.[8] Ivermectin was used in our case and proved to be useful. Local measure consists of mechanical removal of maggots with hemostats, with or without the administration of topical asphyxiation drugs, which forces the larvae to come out. The aim of the management of myiasis is removal of all larvae. Use of normal saline, 0.2% chlorhexidine, iodoform, ethyl chloride, mercuric chloride, turpentine oil and ether has been suggested to compel the living larvae to come out from host tissue. Both the treatment modalities, i.e. manual removal of the larvae and ivermectin therapy, are well documented in the literature. Hence, we decided to combine the treatment modalities with the intention of providing faster relief to the patient. Broad-spectrum antibiotics were given initially to treat superficial infection due to poor oral hygiene. Nutritional supplements were started to improve the general health of the patient. Surgical debridement and necrotic tissue removal that we did have also been advocated in literature. Complications of myiasis include cellulitis, abscess formation, osteomyelitis and tetanus if not treated well in time.[8-10]

CONCLUSION

Special care needs to be taken for medically compromised dependent patients to maintain general and oral hygiene as they are unable to maintain it themselves. It is necessary for these patients to be exposed to regular medical and dental examinations to prevent such complications which if left undiagnosed may prove to be fatal. Oral myiasis is an avoidable problem if proper oral hygiene is maintained specially in medically compromised patients.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Shivpuri A, Saxena V. Oral myiasis: a rare case comprising of more than 100 maggots. Int J Otorhinolaryngol Head Neck Surg 2018;4:833-5.