Oral Myiasis: Case Report of a rare entity!

Abstract:

Background: Floods and severe rainfall are major reasons for the increase ininfections like Dengue, malaria, and other parasitic infections. There may be an increase in worm infestations in the immediate post-floodperiod due to moist conditions. Oral myiasis is one of those rare parasitic infestations that may occur during such events and can be life-threatening to the patient due to its destructive nature. The chances become high if the patient has any underlying condition that can act as a reservoir or favourable host for such infestations. Immediate management of the disease increases the chances of a good prognosis and spread of the disease. Oral Myiasis is still a rare condition caused by larvae of flies called maggots. The following case report is an attempt to highlight the timely recognition of the disease which came to a private clinic with a routine complaint of toothache and its early managementled to the complete recovery of the lesion and the patient.

Key-words: Oral Myiasis, Maggots, Parasites, Infestation.

Introduction:

Oral myiasis is a rare disease caused by an infestation of tissue by larvae of flies. Oral myiasis is considered a "rare" and "unique" entity becausethe oral cavity rarely provides the necessary habitat for a larval lifecycle.[1] Myiasis has been defined as a "pathological condition in which there is an infestation of living mammals with dipterous larvae, which, for at least a certain period, feed on living or dead tissue in the host and develop as parasites" [2]. The word myiasis is derived from a Latin word "muia" which means fly and "iasis" which means disease. [3] and a term derived from the Greek word "myia," meaning invasion of fly larvae into vital tissue of humans or other mammals. They can infest vertebrate animals including humans and feed on living or dead tissue as well as on body fluids.[4] Oral myiasisis often associated with poor oral hygiene, advanced periodontitisor mental disability, alcoholism, senility, severe halitosis, suppurating lesions, and many other conditions. It is more common in rural areas in Africa and America's tropical and sub-tropical zones. It was first described by Laurence in 1909 and occurs in humans mainly in the Tropics.[5] The incidence of such parasitic infections increases when there are incidences of floods and heavy rainfalls. These warm and moist environment leads the parasites to grow faster by providing a favourable climate.

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Here we presenta case of a 54-year-old female patientwho came to a private clinic for routine toothache being unaware of such infestation.

Case report:

A 54-year-old female reported to the private clinic in Gwalior M.P.complaining of pain and swelling in her upper left front

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region of the jaw for 20 days. The history revealed that the patient noticed swelling on the left side of her palate which was initially painless but gradually the pain progressed to mild to moderate intermittent pain which was relieved by taking analgesics.

On extra oral examination, the face was bilaterally symmetrical, the lips were competent. The intraoral examination showed intact buccal mucosa while the palatal mucosa was recessed in association with 23,24.Here, 25 and23 weregrossly decayed while 24had pulp exposure. Both 24 and 25 were showing Grade 1 mobility and were tender on percussion. The general oral hygiene of the patient was poor with heavy calculus deposits and general grade 1 mobility in mandibular teeth as well. The intraoral periapical radiograph showed diffused radiolucency around 23, 24, and 25 along with some haziness.

Management:

The patient was put on Antibiotics (Cap. Clindamycin 300mg BD), Analgesics (Tab. Aceclofenac + Paracetamol BD), and antacids (Tab Pantoprazole 40OD), for 7 days. Routine Blood investigations of CBC, RBS, BT & CT, HIV, and HbsAg were asked for extraction.The Patient was recalled after 2 days for surgical debridement.

Surgical Procedure:

Under complete aseptic conditions, the patient was administered Inj Articaine (Septodont Septanest 4% Articaine with 1:100,000 Epinephrine), extraction of 23, 24 & 25 was done and socket was observed and the presence of maggots was noticed (Figure:1). All the maggots that were removed were alive (Figure: 2).After thorough curettage of the socket, a gauge socked in turpentine oil was placed in the extraction socket for 30 seconds and the socket was then irrigated with Betadine. The same was repeated 3-4 times and was ensured that no maggots remained in the socket. The socket was compressed and only one loose stay suture was given.

Routine post-extraction instructions were given to the patient and medications were continued for 5 days, patient was instructed to use Betadine mouthwash after 24 hours, 3 times daily. The patient was recalled after 48 hours and the extraction socket was irrigated with Betadine and Saline, the socket was carefully examined. After 5 days the medications were stopped and only Betadine mouthwash was continued,the suture was removed after 7 days.

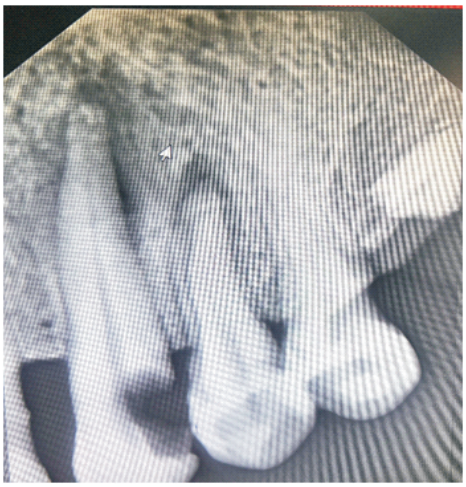

Figure1 Intra9ral periapical radiograph showing radiolucency around the root of 23, 24.

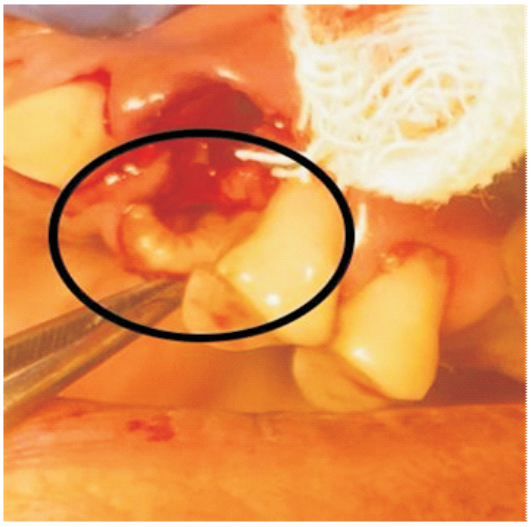

Figure 2 Maggot inside the socket.

Figure 3 Removed Maggot.

Discussion:

Oral myiasis has been reported worldwide, but is not common and is often seen in people with poor oral hygiene. There are many factors associated with oral myiasis including those that result in breaks in the oral mucosa such as gingival disease, trauma, recent tooth extractions and malignancy, and those that result in prolonged mouth opening such as mouth breathing while sleeping, alcoholism, dementia, intellectual disability, incapacitation. Infants who breastfeed from mothers with wound myiasis of the breast may also be at increased risk of oral myiasis [1,6,7]. Post-flood and heavy rain also lead to favourable climatic conditions for parasites to invade prone human beings faster than ever.Myiasis has been extensively classified based on the anatomical site it infests, ecology, and taxonomy. [8]

A report says that patients treated in Brazil, Iran, India, Hong Kong, Israel, and Oman were included, with ages ranging from 9 to 89 years, including 10 males and 8 females. The most common lesion location was the maxilla (13 cases), although the mandible, lips, and "right side of the face" have also been cited. Cases of *Cochliomyia hominivorax* were only reported in Brazil, but, interestingly, concomitant lesions in the maxilla and mandible were not found.[7] In our case, the lesion's location is anterior to the maxilla only. The diagnosis of myiasis is based on clinical evidence, through the visualization of maggots in the tissue. Laboratory analyses are often exempted [9]. Cases already seen in the literature describe patients who may have poor oral hygiene [6,7], a weak nutritional state, senility, trauma, paralysis, unconsciousness, mental debility, alcohol, finger-sucking habits, mouth breathers, or people who maintain their mouths open for long periods, outdoors or residence in agricultural zones.Other cases of oral myiasis have been reported in epileptic patients with lacerated lips following seizures, in children with incompetent lips and thumb-sucking habits, in patients with advanced periodontal disease, tooth extraction sites, in a fun-gating carcinoma of the buccal mucosa and in a patient with tetanus who had his mouth propped open to maintain the airway[5]. Ivermectin, a semi – synthetic macrolide antibiotic, is found safe for human use as proposed by Shinohara *et al*. and Osorio *et al*.[10]

Conclusion:

The diagnosis of oral myiasis is usually easy and should be made at an early stage so that an involvement of deeper tissues can be prevented. This is especially important for individuals with a low socioeconomic status, who may be unaware of the oral lesions.[8]

Declaration of patient consent:

The authors certify that they have obtained the patient's appropriate and necessary consent in the verbal and written format. The patients have given their consent for images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity but anonymity cannot be guaranteed.

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