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I. Abstract

Myiasis is a condition caused by the invasion of tissues by larvae of Diptera flies. This phenomenon is well documented in the skin especially among animals and people in tropical and subtropical areas. The condition causes extensive tissue destruction as the larvae, at least for a certain period, feed on the host's dead or living tissue, liquid body substances, or ingested food. Mouth breathing during sleep, poor oral hygiene, alcoholism, senility, mental disability, cerebral palsy, and hemiplegia may facilitate the development of myiasis. We present a case report of oral myiasis in a 22-year-old male with cerebral palsy and severe mental retardation treated successfully by manual removal of the larvae by topical application of turpentine oil and oral systemic therapy with ivermectin.

II. Introduction - myiasis

1. Latin word "muia" which means fly and "iasis" means disease.
2. Coined by Hope in 1840.Laurence first described oral myiasis in 1909. Myiasis has been defined by Zumpt (1965) 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.
3. The incidence is higher in tropical and subtropical zones of Africa and the America.
4. Myiasis is restricted to the summer months in temperate zones while it can be seen all year round in the tropics.

III. Case report

1. Gemeral data: 22 years old male

2. Chief complaint：worms in the mouth for 3 days

3. Past medical history & family history：

- Cerebral palsy
- Severe mental retardation
- Quadriplegia(四肢麻痺)
- Kyphoscoliosis
- Seizure disorder controlled with medication (carbamazepine, 100 mg, twice/day.)
- Coloboma
- Consanguineous marriage (two siblings; healthy with no diagnosed disorders)

4. Alcohol、Cigarettes：unremarkable

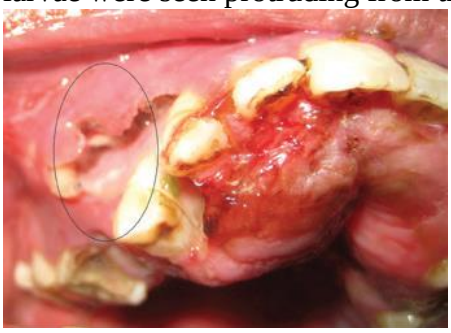
5. Oral care: completely dependent on his mother (with only wet cloth)

6. Extra-oral examination：

-Afebrile
-Weighed only 16 kg
-Severe emaciation(憔悴) and kyphoscoliosis(脊柱後側彎症)

7. Intra-oral examination:

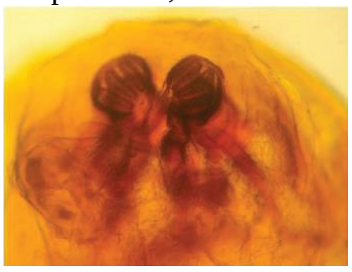
- Incompetent lips
- Anterior open bite
- Very poor oral hygiene
- Ulcerative lesion: buccal aspect of gingiva extending from mesial aspect of maxillary right canine to mesial aspect of maxillary right first molar(Live larvae were seen protruding from this lesion)



- soft, fluctuant, and erythematous swelling observed extending from palatal aspect of maxillary right first premolar to palatal aspect of maxillary left first premolar

8. Clinical differential diagnosis：oral myiasis

9. Histological examination：cephalopharyngeal apparatus and posterior peritremi, larva was identified as Chrysomia species



10. Histologic Diagnosis: myiasis

11. Treatment：

- immediately hospitalized and intravenous antimicrobials including cefexime (750 mg, twice/day) and metronidazole (150 mg, thrice/day) started to control secondary infection

-given single dose of oral suspension containing 3 mg of ivermectin and 400 mg of albendazole.

- Follow-up examination 1 month later revealed decrease palatal swelling.

-Buccal lesions healed satisfactorily

IV. Parasitology

-Removed measured 13 mm in length on an average, were whitish in color and segmented

-Sent to veterinary(獸醫) laboratory for parasitology

- Basis of microscopic examination of cephalopharyngeal apparatus and posterior peritremi, the larva was identified as Chrysomia species

V. Discussion

1. oral myiasis in tropical countries may be more than that reported literature.
2. Mouth breathing during sleep, poor oral hygiene, alcoholism, senility, mental disability, cerebral palsy, and hemiplegia(半身麻痺) may facilitate development of myiasis.
3. Local factors such as halitosis(口臭) can attract the flies.
4. Tropical conditions are more favorable for multiplication of the flies responsible for oral myiasis
5. This causes progressive tissue destruction and cavitation. The larval stage lasts for 6 to 8 days during which they are parasitic to human beings.
6. Subsequent host tissue reaction produces fibrous capsule to which larvae adhere. The larvae have backward directed segmental hooks with which anchor to surrounding tissue.
7. Photophobic and tend to hide deep into tissues for suitable niche to develop into pupa(蛹).
8. The diagnosis of myiasis at early stage can prevent involvement of deeper tissues.
9. The condition can be completely benign and asymptomatic, result in mild to acute pain, or in extreme cases cause death of patient.
10. Proper oral hygiene is essential to ensure against oral myiasis.
11. Traditional management for myiasis involves mechanical removal of larvae. multiple larvae, local application of several substances(iodoform, ethyl chloride,mercuric chloride, creosote, saline or turpentine oil or systemic butazolidine and thiobendazole)

VI. Pharmacology of ivermectin

1. Ivermectin is systemic antihelmenthic(驅蟲劑) that was introduced for professional use in the 1980s.
2. Initially used in humans as a prophylactic in treatment of filariasis(絲蟲病).
3. Treatment of myiasis, single oral dose of ivermectin, 0.2 mg/kg body weight.
4. Contraindicated: children below 3 years of age or less than 15 kg body weight; adverse effects of ivermectin: dermal eruptions, fever, dizziness, migraines, muscular pains, lymphangitis, and pain in joints.

題號	題目
1	下面描述何者錯誤? (A) Bullous impetigo 是因 *Staphylococcus aureus* 感染所造成 (B) Impetigo 又有分成 Nonbullous impetigo 跟 Bullous impetigo (C) Erysipelas 是因 *β-hemolytic Streptococci* 感染深層皮膚所造成 (D) *β-hemolytic Streptococci, adenoviruses* 是發生 Tonsillitis 的致病菌
答案(C)	出處：oral and maxillofacial pathology 3rd ed
題號	題目
2	下面描述何者正確? (A) 3-12 歲的小孩是 Scarlet fever 常發生的年齡 (B) White strawberry tongue 是 Syphilis 的症狀之一 (C) Diphtheria 是被 *Streptococcus pneumoniae* 感染所造成 (D) Mulberry molar 是 Gonorrhea 的症狀之一
答案(A)	出處：oral and maxillofacial pathology 3rd ed