Case Report

Chronic Multi-Orifice Myiasis: A Case Report in a Displaced Pediatric Patient

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Abstract

Introduction: Myiasis is the infestation of live human or animal tissues by dipterous larvae. Nasopharyngeal and multi-orifice infestations are rare, particularly in children.

Case Presentation: We report the case of a 12-year-old male from Sudan, displaced to Port Sudan, who presented with a two-year history of flies emerging from his nose, mouth and ears. The infestation began after a fly entered his ear and was incompletely extracted. Later, he developed recurrent expulsion of both dead and live flies. The condition was socially stigmatizing and psychologically distressing. The Laboratory identification confirmed Musca domestica (common housefly) as the causative agent.

Management and Outcome: The patient was treated with Ivermectin, Albendazole, and Clarithromycin with planned follow-up. The importance of hygiene, social support, and comprehensive management was emphasized.

Conclusion: This case highlights an uncommon chronic presentation of myiasis in a vulnerable pediatric population and underscores the importance of early intervention and public health measures in displaced communities.

Keywords: Myiasis, Multi-orifices myiasis, Case report, Sudan

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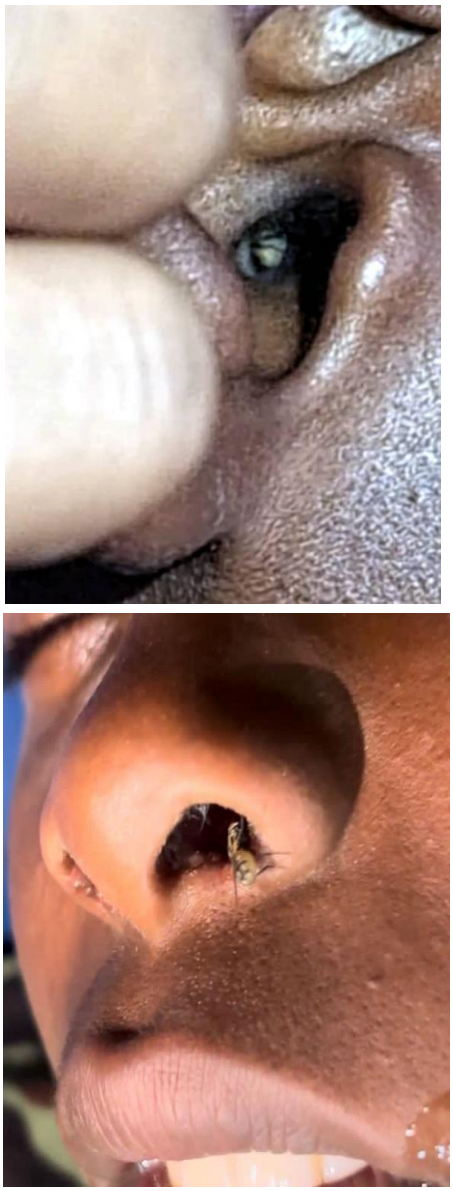
Introduction:

Myiasis is a parasitic infestation caused by dipterous larvae, primarily affecting skin, wounds, and body orifices. (1) Myiasis is an infection of fly larvae in human or animal tissue. Human myiasis is categorized by the location of fly larvae infestation and their relationship with the host. Common types include: cutaneous, nasopharyngeal, ocular, intestinal, and urogenital myiasis. (2) Based on the host-parasite relationship, myiasis can be classified as obligatory, facultative, or accidental. Cutaneous forms are common; but involvement of the nasal cavity, ears, and mouth is rare. (3,4) Multi-orifice myiasis is extremely rare, particularly when it persists chronically over years. (5,6) This case details an extraordinary chronic presentation in a displaced Sudanese child, with a review of management strategies.

Case Presentation:

This is the medical history of a 12 year old boy from Al-Fasher, Darfour, Sudan. He is a member of a displaced family, currently residing in Portsudan. The informant of the history is the mother. When seen the family was livign in a refugee camp with poor hygiene and limited access to healthcare and no health insurance. The family reported psychological distress and social stigma due to the condition.

On clinical examination, there were flies emerging from the nose, mouth, and ears (figure 1A and 1B). The mother reported that this was going on for the previous two years. entered the boy's ear. This was very distressful and the fly was eventually unsuccessfully extracted at home.



A

B

Figure 1: flies emerging from the right ear "A" and left nostril "B"

Subsequently, the family noticed periodic expulsion of dead and live flies from the affected ear. This was associated with itching,

pain and cough. More recently, an episode of generalized tonic-clonic seizure, lasting for 2 minutes was witnessed.

Neurological examination was unremarkable.

Vital signs showed Glasgow Coma Scale (GCS) of 11/15 on admission (recovered post-initial management). Other vital signs were within normal limits.

Diagnostic Assessment

Multi-orifices myiasis was considered as a provisional diagnosis, since there were flies coming out of the patient's orifices.

Laboratory Investigations:

- Complete blood count showed hemoglobin level 11.5 g/dL, leucocyte count of 7.2 × 10^9/ (Lymphocytes34.6%, Neutrophils 55.8%, Eosinophils 9.6%,) Platelets 287 × 10^9/L. C-reactive protien (CRP) was negative. No malaria parsites were seen on blood smear examination. Random blood glucose and serum electrolytes were within normal levels.

Imaging:

showed normal skull x-ray images. Cotrast tomography (CT) of the brain showed pharyngeal soft-tissue changes. Gasrointestinal endoscopy showed pan-gastritis with granular appearance in the antrum. Dead flies were recovered from the stomach (figure 2A and 2B). Examination of the ears showed normal tympanic membranes, and no foreign bodies were detected.

Parasitology Report:

Laboratory identification confirmed Musca domestica (housefly) species based on morphological characteristics in laboratory of Alfajr College for Sciences and Technology(11). The samples were small insects about (6—9) mm in length, the chitin color varying from pale gray, to deep gray.

A

B

Figure 2. Housefly (Musca domestica) stages recovered from the stomach by endoscopy

Therapeutic Intervention:

A multidisciplinary approach involving pediatric, Ear-Nose-Throat (ENT) and tropical disease teams was organized. The treatment was initiated with: Ivermectin (7,10). Albendazole and Clarithromycin (as

clindamycin was not available) as a management protocol for conversations.

The ENT specialist advised local ear care and anti-fungal treatment.

Follow-up and Outcomes:

The patient's follow-up was planned for symptom monitoring and potential further interventions. The immediate post-treatment response was positive; however, long-term follow-up was essential to monitor recurrence and address the psychological and social impact.

Discussion:

Myiasis is common in tropical and subtropical regions, particularly affecting vulnerable populations with poor hygiene. (1) Nasal, oral, and ear myiasis are rare, typically associated with immunocompromised states and poor living conditions. (2,3)

Multi-orifice myiasis is particularly rare. A systematic review identified 63 cases of otic myiasis, often linked to chronic otitis media and poor hygiene. (6) Another pediatric case from Ethiopia described nasal myiasis with angioedema, where prompt endoscopic removal and antibiotic therapy resulted in favorable outcomes. (7)

Musca domestica (housefly) usually causes accidental pseudomyiasis, but can persist in mucosal environments under conducive conditions, particularly in displaced communities. (8,9)

Ivermectin has been proven to be effective in nasal and nasopharyngeal myiasis, reducing larval shedding time and hospital stay. (10)

The psychosocial impact of chronic parasitic infestations in children is significant. This patient experienced stigma and psychological distress within his community, reinforcing the importance of psychosocial and public health interventions alongside medical treatment.

Patient Perspective:

The patient and his family expressed relief upon diagnosis and the initiation of treatment. They described the significant psychological distress and social stigma associated with the condition in the refugee camp.

Conclusion:

This case emphasizes the importance of early recognition, effective multi-disciplinary management, and the need for public health measures targeting hygiene and living conditions in displaced communities. Prompt treatment with systemic anti-parasitic therapy and supportive social interventions are crucial for recovery and reintegration.

Informed Consent: Written informed consent was obtained from the patient's guardian for the publication of this case report and accompanying images.

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