Turkish Journal of Pediatric Disease
Türkiye Çocuk Hastalıkları Dergisi

A Rare Case Report: Pediatric Aural Myiasis Composed of Multiple Live Larvae

Nadir Bir Olgu Sunumu: Çok Sayıda Canlı Larvadan Oluşan Pediatrik Aural Miyazis

Gamze ÖZTÜRK YILMAZ, Gökhan YILMAZ

Department of Otorhinolaryngology, Bitlis Tatvan State Hospital, Bitlis, Türkiye

ABSTRACT

Aural myiasis is a rare otorhinolaryngological disease, which is usually seen in children or mentally retarded patients under poor hygiene conditions and is caused by the infestation of fly larvae in the tissues of vertebrates. A 3-year-old girl presented to the emergency service with her father with the complaint of bloody discharge and moving maggots in the left ear for a week. 23 living larvae were removed from the left ear of the patient who was consulted to the Otorhinolaryngological Clinic. In this article, a rare case of aural myiasis is presented with clinical findings, diagnosis, management of cases and treatment process, in the light of current literature.

Key Words: Children, Ear, Myiasis

ÖZ

Aural miyazis, kötü hijyen koşullarında genellikle çocuklar ya da mental retarde hastalarda görülen, omurgalı canlıların dokularına sinek larvalarının yerleşmesiyle oluşan nadir bir kulak burun boğaz hastalığıdır. 3 yaşındaki kız hasta bir haftadır olan sol kulakta kanlı akıntı ve hareketli kurtlar gözükmesi şikayeti ile babasıyla birlikte acil servise başvurdu. Kulak Burun Boğaz Kliniği'ne konsülte edilen hastanın sol kulağından 23 adet canlı larva temizlendi. Bu makalede nadir görülen aural miyazis olgusu klinik bulgular, tanı, vakaların yönetimi ve tedavi süreci ile birlikte güncel literatür eşliğinde sunulmuştur.

Anahtar Kelimeler: Çocuk, Kulak, Miyazis

INTRODUCTION

Myiasis is the invasion of human tissues by fly larvae (Diptera). Poor hygiene conditions, low socioeconomic status, mental retardation, diabetes, chronic suppurative otitis media, elder age, children under 10 years age, rural areas, humid and hot climate can be counted as predisposing factors for human myiasis (1-4). Myiasis can be seen in the head and neck region, ears, mastoid region, nasal cavity, paranasal sinuses, oral cavity and eyes (5). In the literature, such a high number of live larvae in aural myiasis cases have rarely been encountered. In this article, a case of aural myiasis in a 3-year-old girl who had 23 live larvae cleared from the left external ear canal is presented with clinical findings, diagnosis and treatment process, in the light of current literature.

CASE REPORT

A 3-year-old girl living in a rural area, with a low socioeconomic level and poor personal hygiene, was admitted to the emergency service by her father with complaints of restlessness, constant crying, discharge from the left ear, bleeding and many moving

0000-0002-9478-7603 : ÖZTÜRK YILMAZ G
0000-0002-1900-3565 : YILMAZ G

Conflict of Interest /*Çıkar Çatışması:* *On behalf of all authors, the corresponding author states that there is no conflict of interest.*
Financial Disclosure / *Finansal Destek*: The authors declared that this case has received no financial support.
***Confirmation / Onay*:** The written consent was received from the patient who was presented in this study.
How to cite / *Atıf Yazım Şekli* : Öztürk Yılmaz G and Yılmaz G. A Rare Case Report: Pediatric Aural Myiasis Composed of Multiple Live Larvae. Turkish J Pediatr Dis 2023;17:498-500.

Correspondence Address / Yazışma Adresi :
Gamze ÖZTÜRK YILMAZ
Department of Otorhinolaryngology,
Bitlis Tatvan State Hospital, Bitlis, Türkiye
E-posta: gambu_9199@hotmail.com

Received / Geliş tarihi :10.03.2023
Accepted / Kabul Tarihi :16.05.2023
Online published : 02.08.2023
Elektronik yayın tarihi
DOI: 10.12956/tchd.1263434

Figure 1: Obliterated external auditory canal with larvae

Figure 2: Some of the removed larvae

maggots (Figure 1). In the physical examination of the patient who was consulted to the Otorhinolaryngology Clinic, the left external auditory canal was completely obliterated with living larvae. Right ear and other otolaryngological examinations were normal. It was stated that there was no known ear disease or systemic disease. She has never had ear discharge or similar complaints before. With the help of otomicroscopy, 23 live larvae with an average length of 10-15 mm were removed from the left external ear canal and middle ear using alligator forceps and aspirator (Figure 2).

It was observed that the external ear canal was edematous, with foul-smelling hemorrhagic purulent discharge, and the eardrum was perforated. Washing was done with saline irrigation. No pathological appearance was detected in the left middle ear, ossicles and mastoid cells in the temporal bone computed tomography imaging taken after the larvae were removed. Subsequently, systemic (14 mg/kg cefdinir) and topical (ciprofloxacin) antibiotics were prescribed and close follow-up was recommended. Microbiological examinations could not be performed in our center for the species analysis of the larva. In the follow-ups, no growth was detected as a result of the culture taken from the external ear canal. At the end of the first week, it was observed that the discharge in the external ear canal had completely resolved, and topical and systemic antibiotic therapy was terminated. It was observed that the perforation in the eardrum of the patient, who was followed closely for four weeks, was closed at the end of the fourth week. As a result of the brainstem evoked response audiometry (BERA) test performed in an external center in the first month, it was seen that hearing was within normal limits.

DISCUSSION

Myiasis occurs when fly larvae settle in the tissue and organ cavities of a living vertebrate and these larvae feed on living and dead tissues, body fluids or undigested nutrients in the host. The most common are cutaneous and wound myiasis. This is followed less frequently by myiasis of the body cavities (oral, nasal, aural, ophthalmic, urogenital) that open outward (3,6).

Myiasis cases are frequently seen in people who live in rural areas, have low socioeconomic status, and have poor personal hygiene. Its incidence increases especially in humid and hot climates. Elder age, childhood, mental retardation, and diabetes can be counted among the predisposing factors for myiasis in these individuals (4,5). Most of the cases with aural myiasis have chronic suppurative otitis media (1). Our three-year-old patient had poor personal hygiene and lived in a rural area. The patient, who did not describe ear discharge before, applied to the hospital in the summer season.

The symptoms of aural myiasis are quite diverse. These symptoms include ear pain, bleeding, itching, ringing, humming, decreased hearing, malodorous otorrhea, eardrum perforation, a moving object sensation in the ear, the appearance of larvae in the external auditory canal, and dizziness. In rare cases, neurological symptoms due to intracranial involvement may be seen. Myiasis is a self-limiting disease, as the larvae leave the host when they are fully mature, but if left untreated it can rarely lead to fatal complications. In cases of intracranial involvement in nasal and aural myiasis, a mortality rate of 8% has been reported (1,2,4). In our case, the patient was brought to the

hospital by her father with complaints of restlessness, crying, bloody and foul-smelling ear discharge, and the appearance of moving maggots in the external ear canal.

Since the larvae are usually in the external ear canal, anamnesis and physical examination are sufficient for diagnosis. In cases of clinical suspicion, computed tomography can be performed to investigate complications such as mastoid cavity invasion or intracranial spread (4,5). In the temporal bone computed tomography imaging taken from our patient, no pathological appearance was detected in the left middle ear, ossicles and mastoid cells.

Since aural myiasis is usually self-limited, the treatment is simple, but early intervention should be performed to prevent complications (2,6). Treatment consists of removing the larvae and washing the external ear canal with 10% chloroform, 70% ethanol, saline, iodine, oil, ivermectin. If tympanic membrane perforation is observed, only saline irrigation and simultaneous aspiration should be applied. Prophylactic antibiotics are recommended to prevent secondary bacterial infections (1,5). In our patient, after cleaning the larvae under otomicroscopy, perforation of the eardrum was observed, and topical and systemic antibiotics were prescribed after washing with saline.

It should be evaluated whether the eardrum is intact or not. Hearing levels should be measured before and after treatment. Surgical treatment should be performed as soon as possible in cases of widespread disease, middle ear involvement, prolonged disease course despite treatment, suspected residual disease, and suspected intracranial involvement. Compliance with hygiene rules and close follow-up of patients is significant in terms of reducing recurrences and preventing complications (3,4,5). Our patient was followed for four weeks, and no recurrence was observed during the follow-up, and it was observed that the perforation in the eardrum was closed. As a result of the BERA test performed in an external center, it was observed that hearing was within normal limits.

CONCLUSION

In conclusion, although aural myiasis is rare, it should be remembered in cases of unexplained ear pain, discharge, and hearing loss in children, elderly, mentally retarded, poor hygienic conditions and risk group patients living in rural areas. Although the diagnosis and management is simple, it can lead to serious complications in cases where treatment is delayed.

REFERENCES

1. Olatoke F, Afolabi OA, Lasisi OA, Alabi BS, Aluko AA. Aural myiasis: Case report from Nigeria. Int J Pediatr Otorhinolaryngol Extra 2011;6: 233-4.
2. Abraham ZS, Ntunaguzi D, Kahinga AA, Lengine EO, Mhamilawa LE, Massawe ER. A rare case report of aural myiasis in a 24-day old neonate in Tanzania. International Journal of Otorhinolaryngology and Head and Neck Surgery 2019;5:1397-9.
3. Wang Y, Sun Y, Kong W, Wang Y. Aural Myiasis: A Case Report and Literature Review. Ear Nose Throat J 2022;101:430-2.
4. Al Jabr I. Aural Myiasis, a Rare Cause of Earache. Case Rep Otolaryngol 2015;2015:219529
5. Tbini M, Jaafoura H, Ghabi M, Chebil E, Bensalah M. Otomyiasis caused by Musca domestica in a child: A case report. Int J Surg Case Rep 2022;94:107108
6. Pappano DA, Trout Fryxell R, Bernard E, Radu H. Domestically Acquired Aural Myiasis in a Tennessee Girl. Pediatr Emerg Care 2020;36:654-5.