Case Report:

Aural Myiasis in a Saudi Infant

AHMED Y. AL-QARNI, M.B.B.S. and YAHYA AL-AHMARY, M.D.

The Department of ORL-HNS, Muhayel General Hospital, KSA

Abstract

Objective: To report a case of aural myiasis in an infant living in a low hygienic condition at the southwestern part of Saudi Arabia.

Case Report: A 4-month old, Saudi girl was brought by her parents to the Otolaryngology Outpatient Clinic of Muhayel General Hospital, in Muhayel, Saudi Arabia, with the complaint of a painful small swelling in front of the right ear for one week. There was a moving maggot inside a swelling in front of the right ear. The maggot was removed by forceps and suction was done for the discharge. Amoxicillin clavulanate suspension and sodium fusidate ointment were prescribed and the patient was discharged. Strict instructions for better hygiene were given to the parents and they were asked to bring their daughter weekly for follow-up of her condition. One month later, there were no further complaints of swelling or discharge. Examination revealed that both ears were normal.

Conclusions: Aural myiasis is typically seen in patients with poor hygienic conditions. Its management is by mechanical removal of maggots and treatment with broad-spectrum antibiotics. Cleanliness, personal hygiene and control of flies are necessary measures for prevention of myiasis.

Key Words: Myiasis – Aural – Tumbu fly – Hygiene – Socio-economic status.

Introduction

MYIASIS is 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. It is a rare condition caused by the larvae of flies, which become attracted to the foul smell of damaged tissues [1]. It can be classified as obligatory, when larvae develop in living tissue, or facultative when maggots feed on necrotic tissues [2].

The condition required for egg laying and survival of the larva is moisture, necrotic tissue, and suitable temperature. The larvae are photophobic, and therefore tend to hide themselves deep into the tissues, and also to secure a suitable niche to develop into pupa. Proteolytic enzymes released by the surrounding bacteria decompose the tissue, and the larva feed on this rotten tissue [3].

At present, myiasis is commonly seen in animals, but it is quite rare in humans due to improved standards of hygiene and living conditions. Most reported cases occurred in developing countries and in the tropics, and very few in western countries [4].

The aim of this paper is to report a case of aural myiasis in an infant living in a low hygienic condition at the Southwestern part of Saudi Arabia.

Case Report

On February 23rd, 2015, a 4-month old, Saudi girl was brought by her parents to the Otolaryngology Outpatient Clinic of Muhayel General Hospital, in Muhayel, Saudi Arabia, with the complaint of a painful small swelling in front of the right ear for one week. The swelling has been gradually increasing in size, associated with watery discharge. On that day, the swelling ruptured and a moving mass was seen inside. However, the mass quickly disappeared when the father tried to hold it. There were no bleeding or any other associated symptoms.

Both parents were illiterate. The patient's family was poor, living in a rural area, raising animals at home, with apparently bad hygienic conditions.

On examination the infant appeared with normal growth and development. The left ear was normal. Examination of the right ear revealed that there was normal external auditory canal and tympanic membrane. A moving mass of a maggot was seen inside a swelling in
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front of the right ear Fig. (1). The maggot was removed by forceps and suction was done for the discharge. A living maggot could be extracted and sent to the Parasitology Lab Fig. (2).

Amoxicillin clavulanate suspension (40mg/kg/day TID for one week) and sodium fusidate ointment (BID for one week) were prescribed and the patient was discharged. Strict instructions for better hygiene were given to the parents and they were asked to bring their daughter weekly to the outpatient clinic for follow-up of her condition.

The parasitology report revealed that the maggot belonged to the Tumbu fly, "Cordylobia anthropophagi".

One month later, there were no further complaints of swelling or discharge. Examination revealed that both ears were normal.

Discussion

Myiasis is a disease caused by fly larvae and aural myiasis is a rare clinical condition often occurring in children [3,5].

Our patient came from a rural area at the Southwestern part of Saudi Arabia. She belonged to a poor family who lived under low hygienic conditions. The Tumbu fly, "Cordylobia anthropophagi" was the responsible agent for the condition of our case.

These findings are in accordance with those reported by several researchers. Hatten et al., [6] noted that aural myiasis is a rare otolaryngological disease typically seen in poor hygienic conditions. It occurs predominantly in rural areas and is associated with poor hygienic practices and low educational level. Therefore, most cases of myiasis were reported in developing countries and in the tropics as a result of low standards of living.

Demirel Kaya et al., [7] added that myiasis is seen more frequently in rural regions where people are in close contact with animals. Low socioeconomic level, poor hygienic conditions and the presence of an open, neglected wound are the most important predisposing factors that lead to the development of myiasis.

Tamir et al., [8] stated that the Tumbu fly is the most common cause of myiasis in tropical Africa. However, Omar and Abdalla [9] confirmed that this species is not restricted to tropical Africa when they identified a case of myiasis in a 4-year child from Aseer Region, at the southwestern part of Saudi Arabia.

Our case presented with a painful and growing swelling in front of the right ear associated with watery discharge.

Yuca et al., [10] stated that the clinical symptoms of aural myiasis could show a wide spectrum of symptoms; from silent infestation to otalgia, otorrhea, perforation of the tympanic membrane, bleeding, itching, mechanical sound, tinnitus, furuncle of the external ear and hearing impairment.

In our case, the maggot was mechanically extracted and sent to the Parasitology which identified the causative agent. Moreover, systemic and local antibiotics were prescribed. Instructions regarding cleanliness and personal hygiene as well as control of flies were given to parents.

Demirel Kaya et al., [7] stated that the diagnosis of myiasis is usually easy. It depends on the dem-
onstration of the larvae on the host's tissues or organs. Correct identification of the larvae is important for the initiation of appropriate treatment and establishment of preventive measures.

Shinohara et al., (11) stated that the traditional management for myiasis is mechanical removal of maggots. Systemic treatment includes broad-spectrum antibiotics, especially when the wound is secondarily infected.

Myiasis is a self-limiting disease due to the fact that the larvae leave their host when they are fully matured. However, fatal complications can occur. Infestations of the ears is potentially extremely dangerous when the larvae penetrate the brain, in which the case fatality rate can be as high as 8% [8]. Severe complications may be related to the involvement of the skull base (12).

In conclusion, aural myiasis is a rare clinical condition typically seen in patients with poor hygienic conditions. Its management is by mechanical removal of maggots and treatment with broad-spectrum antibiotics, especially when the wound is secondarily infected. Cleanliness, personal hygiene and control of flies are necessary measures for prevention of myiasis.

References