

# Myiasis of Tracheotomy Wound Caused by *Lucilia Sericata*: A Rare Case Report from Turkey

## Trakeotomi Yarasında *Lucilia Sericata*'nın Neden Olduğu Miyazis: Türkiye'den Nadir Görülen Bir Olgu Sunumu

Giray AYNALI,<sup>a</sup>  
Ayşe AYNALI,<sup>b</sup>  
Murat YARIKTAŞ,<sup>a</sup>  
Selçuk KAYA,<sup>b</sup>  
Hasan YASAN<sup>a</sup>

Departments of  
<sup>a</sup>Ear, Nose and Throat-Head and  
Neck Surgery,  
<sup>b</sup>Microbiology,  
Süleyman Demirel University  
Faculty of Medicine, Isparta

Geliş Tarihi/Received: 24.02.2011  
Kabul Tarihi/Accepted: 05.06.2011

*This case report has been presented as a  
poster at 32<sup>th</sup> Turkish National  
Otorhinolaryngology and Head Neck Surgery  
Congress, Antalya, 2010.*

Yazışma Adresi/Correspondence:  
Giray AYNALI  
Süleyman Demirel University  
Faculty of Medicine,  
Department of Ear, Nose and  
Throat-Head and Neck Surgery,  
Isparta,  
TÜRKİYE/TURKEY  
giraynali@yahoo.com

**ABSTRACT** Although myiasis is not a frequently encountered case in otorhinolaryngology practice, reported cases often involved the nose, ear and pharynx in rank order. Myiasis of tracheotomy wound is extremely rare. *Lucilia* larvae tend to infest the wound tissue (e.g. tracheotomy) rather than healthy tissues. Older and lonely patients with tracheotomy should be controlled by primary health care periodically. We report a *Lucilia sericata* myiasis in tracheotomy wound of an 80-year-old male patient who lived alone and had decreased hearing and vision due to senility.

**Key Words:** Myiasis; tracheotomy

**ÖZET** Kulak burun boğaz kliniklerinde miyazis ile sık karşılaşılmamakla birlikte, bildirilen vakalar sıklık sırasına göre burun, kulak ve farenkstedir. Trakeotomi yarasında miyazis çok nadirdir. *Lucilia* larvaları sağlam dokudan daha çok yara dokusunu enfeste etme eğilimindedirler. Eğer trakeotomili hasta yaşlı ve kimsesiz ise, aile sağlığı ya da toplum sağlığı merkezleri tarafından periyodik olarak kontrol edilmelidir. Bu olguda yalnız yaşayan, görme ve işitme problemi olan 80 yaşındaki hastanın trakeotomi yarasındaki *Lucilia sericata* miyazisini sunduk.

**Anahtar Kelimeler:** Miyazis; trakeotomi

**Türkiye Klinikleri J Med Sci 2012;32(6):1729-31**

**M**iyiasis is a rare condition caused by the infestation of tissues by the larvae of flies. Myiasis has been reported previously in various human organs.<sup>1</sup> Myiasis is a rare parasitic infestation in human and is extremely rare in the Western countries. Flies causing myiasis can be classified into two groups based on the relationship with their hosts: Obligate parasites (on live hosts) and facultative parasites (on either live hosts or carrion). *Lucilia sericata* is one of the facultative parasites which cause myiasis in animals and rarely in humans, as an ectoparasite. *Lucilia sericata* is a common green blow-fly found in most areas of the world. *Lucilia* larvae rarely infest living tissues and food.<sup>2,3</sup>

Myiasis of tracheotomy wound is extremely rare in the otorhinolaryngology literature. To the best of our knowledge, only three cases of myiasis in a tracheotomy wound have been reported in English literature.<sup>2,4,5</sup>

doi: 10.5336/medsci.2011-23475

Copyright © 2012 by Türkiye Klinikleri

## CASE REPORT

An 80-year-old man admitted to our clinic with itching in tracheotomy area and cough. The patient indicated that these symptoms had progressively worsened during the previous month. He had had a tracheotomy following a complicated total thyroidectomy (bilateral vocal cord paralysis) due to thyroid papillary carcinoma six months before. He also had decreased hearing and vision due to senility. Physical examination revealed numerous (more than 40) moving maggots in the outer part of his edematous tracheotomy cavity and around the cannula (Figure 1). No larvae were seen in the other parts of the body. The patient was living alone, thus he could not notice the maggots.

All maggots and the tracheotomy cannula were removed. Tracheotomy area was cleaned mechanically and chemically by povidone iodine. No maggots were seen in the larynx, trachea or bronchus on endoscopic examination. Tracheotomy cannula was replaced with a new one and the tracheotomy wound and cannula were cleaned twice everyday for five days. The patient was under follow up for one month, and no recurrence was observed during this period.

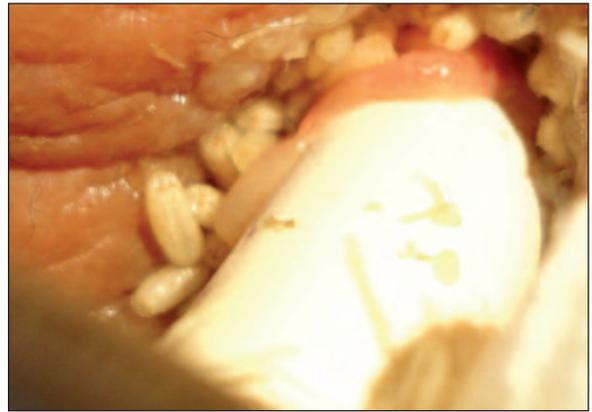
## DISCUSSION

Myiasis is usually seen in the nose, ear and pharynx in otorhinolaryngology practice.<sup>6</sup> Myiasis of tracheotomy wound is extremely rare, and it can be considered as a particular variety of cutaneous or a cavity myiasis because the stoma is a transition area between the skin and the tracheal cavity.<sup>2</sup>

*Lucilia sericata* is a common fly in the world, belongs to Calliphoridae family and order of Diptera. *Lucilia* larva has two visible posterior breathing spiracles (Figure 2). Infestation of humans occurs in wounds, mouth, eyes and nose. It causes itching, pain, inflammation, secondary bacterial infections, eosinophilia and erythema.<sup>3</sup> In our case, the patient was suffering from itching and cough due to the localization of myiasis. On physical examination, the tracheotomy wound was edematous and resembled a mass. The edema was so massive



**FIGURE 1:** Larvae and edema in the tracheotomy wound.  
(See for colored form <http://tipbilimleri.turkiyeklinikleri.com/>)



**FIGURE 2:** Two posterior breathing spiracles of *Lucilia* larvae.  
(See for colored form <http://tipbilimleri.turkiyeklinikleri.com/>)

that could obliterate the tracheotomy site if the cannula was removed (Figure 2). Therefore, if infestation was not treated and the cannula was removed, the cavity could be obliterated due to intensive edema and it could be difficult to introduce the cannula into the tracheotomy orifice. Moreover, a secondary bacterial infection could accelerate this process.

Arora et al. have reported that otorhinolaryngologic myiasis more frequently occurs in individuals with poor socioeconomic status and educational level.<sup>6</sup> In the present case, the patient was an elderly farmer who lived alone. He was debilitated and unaware of his condition. He also had decreased hearing and vision due to senility.

This case shows that *Lucilia* larvae tend to infest wound tissues rather than the healthy ones. Because, although tracheotomy cannula had no cuff and thus maggots were capable of infesting larynx and/or trachea, they did not tend to invade tracheobronchial area. However, intensive edema can obliterate the cavity. Besides, tracheotomy care

requires a special attention in debilitated patients. The otolaryngologist should, therefore, explain the care of tracheotomy wound and the cannula to patients and to their relatives. It is very important to advise patients without a relative or caregiver that they should not neglect their periodical controls in a primary health center.

## REFERENCES

1. Büyükkurt MC, Miloğlu Ö, Nalbantçolu S, Uslu H, Yolcu Ü, Aktaş O. [Oral myiasis in a child due to *wohlfahrtia magnifica*: original image]. *Türkiye Klinikleri J Med Sci* 2008;28(5):782-5.
2. Franza R, Leo L, Minerva T, Sanapo F. Myiasis of the tracheostomy wound: case report. *Acta Otorhinolaryngol Ital* 2006;26(4):222-4.
3. Talari SA, Sadr F, Doroodgar A, Talari MR, Gharabagh AS. Wound myiasis caused by *Lucilia Sericata*. *Arch. Iranian Med* 2004;7(2):128-9.
4. Bhatia ML, Dutta K. Myiasis of the tracheostomy wound. *J Laryngol Otol* 1965;79(10):907-11.
5. Josephson RL, Kraiden S. An unusual nosocomial infection: nasotracheal myiasis. *J Otolaryngol* 1993;22(1):46-7.
6. Arora S, Sharma JK, Pippal SK, Sethi Y, Yadav A. Clinical etiology of myiasis in ENT: a reterograde period-interval study. *Braz J Otorhinolaryngol* 2009;75(3):356-61.