Journal of Gastroenterology, Hepatology and Endoscopy

Case Report
Published: 13 Oct, 2017

Myiasis of the Percutaneous Endoscopic Gastrostomy Stoma: The First Case Report

Yuksel Guleryuzlu[1], Nevin Yilmaz[1], Mustafa Celik[2], Cetin Kilinc[3] and Yavuz Pirhan[4]*

[1]Department of Gastroenterology, Mugla Sitki Kocman University, Turkey

[2]Department of Gastroenterology, Pamukkale University School of Medicine, Turkey

[3]Department of Microbiology, Amasya University Sabuncuoğlu Şerefeddin Training and Research Hospital, Turkey

[4]Department of Surgery, Amasya University Sabuncuoğlu Şerefeddin Training and Research Hospital, Turkey

Abstract

Myiasis (myia is Greek for fly) is an infestation of living or necrotic tissues caused by fly larvae. The disease may occur in different tissues and cavities in humans. To date various myiasis cases were reported. We present the case of percutaneous endoscopic gastrostomy stoma myiasis which is the first case in the literature.

Keywords: Myiasis; Percutaneous endoscopic gastrostomy; Diptera

Introduction

The term myiasis (myia is Greek for fly) first proposed by Hope in 1840 is an infestation of the living or necrotic tissues by developing larvae (maggots or grubs) of a variety of fly species within the arthropod order Diptera. The disease is mostly self-limited and may occur in different tissues included dermal, sub-dermal, nasopharyngeal, ocular, enteric, urogenital and open wounds. The main factors contributing to development of myiasis are unhealthy environments, lack of personal hygiene and underlying diseases [1-3].

Various myiasis cases were reported in the PubMed data base but there is no percutaneous endoscopic gastrostomy (PEG)-related cases to date. In this report we describe the first case of PEG stoma myiasis and briefly reviewed the literature.

Case Presentation

A 79-year-old female patient who had undergone PEG procedure 4 months prior to oral feeding due to ischemic stroke applied to our emergency department because of maggots at the PEG stoma. According to story taken by relatives the PEG site was cleaned with soapy water 2-3 times per week, fed with nutrient solutions and she lives in the village.

On her physical examination; consciousness was clear without co-operation and orientation, bedridden and her hygiene was in poor condition. The PEG tube seemed to be mobile and was in place. The tissues around the stoma were hyperemic, and numerous creeping whitish worms 10 mm to 12 mm in length were exiting from stoma (Figure 1 and Video 1). The complete blood count and serum chemistry were within normal limits.

The patient was admitted and multiple, debridements with removal of maggots using Povidone-Iodine soaked gauze were done. These maggots were sent to the microbiology labs and identified as myiasis from Diptera families. Nearly 100 maggots were removed, and totally disappearance lasted 3-4 days.

Daily dressing was made with Povidone-Iodine and wound was left open. No additional medication was given. In the week of admission, the wound healed well and the patient was discharged in a stable condition with her own PEG tube. There was no recurrence in the patient with clinical improvement after dressing.

Discussion

Cutaneous or wound myiasis as presented may be the result of facultative or obligatory parasite which is a necessary part of their life cycle. The adult female Diptera lay the eggs in living tissue and within a day larval formation occur. The larvae feed directly on the hosts' necrotic or living tissue

OPEN ACCESS

Correspondence:
Nevin Yilmaz, Department of Gastroenterology, Mugla Sitki Kocman University, Kotekli Mah.61.Sok Toki Evleri, D Blok No: 9Ickapı No: 5, Mentese, Mugla, Turkey, Tel: +90 533 647 3883, Fax: +90 252 211 4847; E-mail: nevinylmz@yahoo.com

Received Date: *25 Aug 2017*
Accepted Date: *06 Oct 2017*
Published Date: *13 Oct 2017*

Citation:
Guleryuzlu Y, Yilmaz N, Celik M, Kilinc C, Pirhan Y. Myiasis of the Percutaneous Endoscopic Gastrostomy Stoma: The First Case Report. J Gastroenterol Hepatol Endosc. 2017; 2(5): 1026.

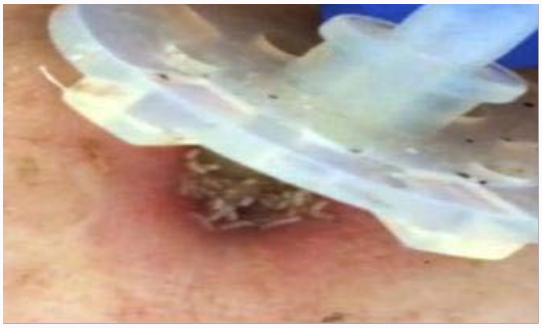
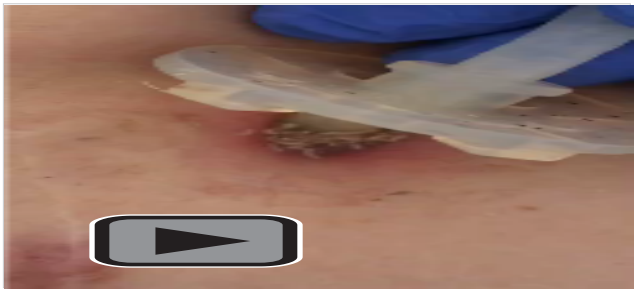


Figure 1: The external bumper and maggots in PEG stoma.



Video 1: The creeping maggots in PEG stoma.

and the wounds increase in sizes as they feed.

Diagnosis is typically made by identification of maggot's species usually done by a trained entomologist. Molecular investigation is also highly specific [1,3].

Once the larva has emerged or has been removed, the lesions rapidly resolve. Therefore wound myiasis requires debridement with irrigation. Ether, chloroform, and turpentine oil can be used to suffocate the larvae. An alternative treatment for all types of myiasis is oral ivermectin or topical ivermectin (1% solution), proven especially helpful with oral and orbital myiasis [3].

In the case of secondary pyogenic infection, appropriate antibiotics should be administered. Vaccination for *Clostridium tetani* should be considered in affected individuals. To prevent wound myiasis, simple antisepsis is usually adequate and patients should be educated about preventive measures to avoid exposure to Diptera flies [1-4].

Myiasis of the PEG stoma as well as tracheostomy stoma myiasis could be considered a particular variety of cutaneous or a cavity myiasis because the stoma is a transition area between the skin and the stomach [5]. However, the presented case was uncomplicated and the patient was treated as a result of mechanical removal of worms and suffocation with Povidone-Iodine. Iodine's disinfectant effect was also utilized. Recently the artificial maggots are being tested in some wound treatments [1].

In this case, the patient was lack of self-care and communication, which make it easier for flies to lay eggs on the body surface. Also neglected skin care and sweet smell of PEG solution may have attracted the flies into the stoma.

The maggot's species was not identified in the case but the stage and species of larvae are important in forensic science. The Muscidae (house fly) and Calliphoridae (blow fly) families are common in the countryside of our country. In the United States and in our country mostly reported cases of wound myiasis were caused by flies of the family Calliphoridae [1,6,7]. The adult females lay clusters of up to 200 eggs at a time, on the host or carcass and can be multiple generations per year [8].

In conclusion, there is a possibility of miyazis in rural areas, especially in summer, where hygiene conditions are low hence we emphasized the importance of health education in home PEG stoma care to the patient and his family in preventing such an adverse event from occurring in this case report.

References

1. Francesconi F, Lupi O. Myiasis. Clin Microbiol Rev. 2012;25(1):79-105.
2. Batista-da-Silva JA, Moya-Borja GE, Queiroz MMC. Factors of susceptibility of human myiasis caused by the new world screw-worm, Cochliomyia hominivorax in São Gonçalo, Rio de Janeiro, Brazil. J Insect Sci. 2011;11:14.
3. Blechman AB, Wilson BB, Myiasis. MedScape. 2016 May 13.
4. Kumar P, Ravikumar A, Somu L, Prabhu PV, Subbara RMSP. Tracheostomal myiasis: A case report and review of the literature. Case Rep Otolaryngol. 2011;2011:303510.
5. Franza R, Leo L, Minerva T, Sanapo F. Myiasis of the tracheostomy wound: case report. Acta Otorhinolaryngo lItal. 2006;26(4):222-4.
6. Şenel E, Uslu A, Taylan Özkan A, Mumcuoğlu K. [Interdigital myiasis caused by Lucilia sericata in a diabetic patient]. Flora. 2016;21(1):131-3.
7. Kılıc K, Arslan MO, Kara M. [The postoperative wound caused by Lucilia sericata (Diptera: Calliphoridae) in a woman in Kars]. Turkiye Parazitol Derg. 2011;35:43.
8. Anderson M, Kaufman PE. Lucilia sericata. Featured Creatures. 2011;EENY-502.