



TRACHEOSTOMAL MYIASIS: A CASE REPORT

Otorhinolaryngology

Dr. M. Erin Jino*	Junior Resident, Dept. of ENT, Sree Mookambika Institute of Medical Sciences, Kanyakumari, India. *Corresponding Author
Dr. Deepak Rajadurai. V	Junior Resident, Dept. of ENT, Sree Mookambika Institute of Medical Sciences, Kanyakumari, India.
Dr. Lyra Joy	Assistant Professor, Dept. of ENT, Sree Mookambika Institute of Medical Sciences, Kanyakumari, India.

ABSTRACT

"Myiasis" is considered in Hindu mythology as "God's punishment for sinners." Myiasis of the tracheal stoma is rare. Only a few cases have been. We report a case of tracheostomal myiasis in an elderly male. The species which had infested the stoma was identified as *Chrysomya bezziana*, an obligate parasite. B

KEYWORDS

Tracheostomy/ Myiasis/ Maggots/ *Chrysomya bezziana*

INTRODUCTION

Case Report

65 Year old male presented in ENT op with bleeding from tracheostomy stoma since 1 day. Patient was tracheostomised 1 year back in view of CA Glottis (subsite-left vocal cord). Patient had undergone 33 cycles of RT and 4 cycles of CT. On examination His general condition was fair, Vitals stable. Portex tube size 7.5 in situ. No tube blockage. Good air blast. Foul smelling discharge from the stoma.

Maggots creeping all around the tracheostomy tube. Endoscopic study: VLS was done which showed edema of arytenoid, vocal cord, epiglottis. Tracheostomy tube was changed and about 45 maggots were removed from the stoma and wound cleaning was done. I.V antibiotics, Tracheostomy care and wound dressing with turpentine soaked gauze taking adequate precautions so turpentine was not aspirated. After 48 hours there was no maggots and wound healed well. Patient was discharged in a stable condition with portex tube. He was advised regular follow up care. Takers were educated about tracheostomy tube home care.



DISCUSSION

Dipterous larvae in the obligate group develop in living tissue of the host, and this is a necessary part of their life cycle. In contrast, facultative group consists of species that are free living, feeding on decaying material, that is, animal carcasses [1].

Chrysomya bezziana, also known as "old world screwworm," is an obligate parasite and belongs to the order Diptera, family Calliphoridae, and suborder Cyclorrhapha. The adult fly of *Chrysomya bezziana* is a green or blue-green fly that is widely distributed in tropical and subtropical countries of Africa and Asia, including Southeast Asia, India, Saudi Arabia, Indonesia, the Philippines, Papua, New Guinea, and Persian Gulf [2, 3]. The adult fly feeds on decomposing corpses, decaying matter, excreta, and flowers. Adult female fly lays eggs only on live mammalian tissue, depositing about 200 eggs at sites of wound or in body orifices such as ear and nose.

Vegetative state of the patient, psychiatric illness, immuno

compromised individuals, exposed wound with foul smelling discharge, infective dermatitis, Hansen's disease, low socioeconomic status, close proximity to domestic, and peridomestic animals such as dogs and rats [4] are few of the predisposing factors for myiasis.

We could find only a handful of cases reported in literature. In one case, the myiasis was secondary to an aspirated foreign body via the tracheostomy tube lodged in the intrathoracic trachea [5]. Two cases have been reported in patients who had a tracheostomy for thyroid malignancy [6, 8].

The main stay of treatment is removal of maggots with thorough wound debridement along with management of systemic and comorbid illness.

Larvae can also be killed by applying proper insecticides to the infected areas and making sure the wounds are properly dressed. Organophosphorus insecticides like coumaphos, dichlofenthion, and fenclorophos can be applied to wounds with fly larvae [7]. Ether, chloroform, and turpentine oil can be used to suffocate the larvae. These cause the larvae to leave the wound and fall to the ground, and the larvae will die without a host to feed on.

Another method that has been tried is the use of single dose of subcutaneous ivermectin (200 microgram/kg) or doramectin (200 microgram/kg), which prevents strike and restrike of treated wounds [8–10]. Risks of use of organophosphorous compounds for tracheostomy wound myiasis is high and hence not used.

We have been using turpentine oil for all cases of myiasis in the ENT region with success, but a word of caution is that while using it around the tracheostoma, if adequate precaution is not taken, there is a high risk of chemical pneumonitis.

We need to be aware of a few problems that can occur with maggots around the tracheostomy tube. Aspiration of the maggots themselves is a major concern causing airway obstruction and aspiration pneumonitis. Aggressive nonjudicious removal of maggots in the neck can also damage the major blood vessels of the neck (carotid artery and jugular vein) causing torrential bleeding. Embolisation of maggots via the blood vessels is an expected complication too, causing thrombosis of the adjoining vessel.

In our case the predisposing factors for such infestation could be

- Odour of decomposition that can attract flies, Persistent vegetative state, Poor hygiene,
- Habit of keeping the area uncovered and irregular cleaning of tracheostomy tube.

The main stay of treatment is removal of maggots with thorough wound debridement. Clearing the maggots with turpentine oil, and antiseptic dressing is very important.



CONCLUSION

Myiasis of the tracheostomy wound is extremely rare, with few cases reported, this is the first reported case of obligate parasite *Chrysomya bezziana* infestation of the tracheostomy wound.

Management of myiasis of the tracheostomy wound needs precautions to prevent aspiration of maggots and the chemicals used to remove maggot.

Though infestation of the tracheostoma with maggots is rare, such a possibility exists. Otorhinolaryngologists need to be aware of this condition. We emphasize the importance of health education in home tracheostomy tube care to the patient and his family which will go a long way in preventing such an adverse event from occurring.

REFERENCES

1. J. Amendt, M. L. Goff, C. P. Compobasso, and M. Gherardi, *Forensic Implications of Myiasis, Current Concepts of Forensic Entomology*, chapter 14, Springer, 2010.
2. J. P. Spradbery, "Screw-worm fly: a tale of two species," *Agricultural Zoology Reviews*, vol. 6, pp. 1-62, 1994.
3. R. W. Sutherst, J. P. Spradbery, and G. F. Maywald, "The potential geographical distribution of the old world screw-worm fly, *chrysomya bezziana*," *Medical and Veterinary Entomology*, vol. 3, no. 3, pp. 273-280, 1989.
4. M. D. A. Vitvasiri, FICS, M. D. P. Charoenchasi, M. S. S. Kaewmanee, and M. D. M. Bhaibulaya, "Subdermal myiasis caused by maggots of *chrysomya bezziana*," *Siriraj Hospital Gazette*, vol. 47, no. 5, pp. 419-422, 1995.
5. J. C. Fraga, A. F. Pires, M. Komlos, E. E. Takamatu, L. G. Camargo, and F. H. Á. Contelli, "Bronchoscopic removal of foreign body from airway through tracheotomy or tracheostomy," *Jornal de Pediatria*, vol. 79, no. 4, pp. 369-372, 2003.
6. S. Gopalakrishnan, R. Srinivasan, S. Saxena, and J. Shanmugapriya, "Myiasis in different types of carcinoma cases in southern India," *Indian Journal of Medical Microbiology*, vol. 26, no. 2, pp. 189-192, 2008.
7. O. H. Graham, "The chemical control of screwworm : a review," *Southwestern Entomologist*, vol. 4, pp. 258-264, 1979.
8. I. D. Perkins, "Use of insecticides to control screw-worm fly strike by *chrysomya bezziana* in cattle," *Australian Veterinary Journal*, vol. 64, no. 1, pp. 17-20, 1987.
9. J. P. Spradbery, R. S. Tozer, N. Drewett, and M. J. Lindsey, "The efficacy of ivermectin against larvae of the screw-worm fly (*chrysomya bezziana*)," *Australian Veterinary Journal*, vol. 62, no. 9, pp. 311-314, 1985.
10. J. H. Guimaraes and N. Papavero, *Myiasis in Man and Animals in the Neotropical Region: Bibliographic Database*, Pleiade/FAPESP, Sao Paulo, Brazil, 1999.