

Case Report

Nasal myiasis presented with palatal perforation: a Case report

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ABSTRACT

Myiasis is rare disease of nose. In this case report we present a 47 years female with nasal myiasis along with palatal perforation which was managed conservatively with antibiotics, manual removal of maggots and planned for closure of oro-nasal fistula later. Later on the bleeding was gradually controlled. Patient was advised for imaging of nose and paranasal sinuses. The imaging showed soft tissues densities in the bilateral nasal cavity with erosion of nasal septum, hard palate and soft palate with oronasal fistula formation.

Key Words: Myiasis, maggots, oronasal fistula

INTRODUCTION

Myiasis is infection of tissues or organs of animals by larva of house fly. Myiasis occurs primarily in unhealthy individuals [1]. Common infection sites are skin wounds and eyes, and nose, nasal sinuses, throat, ear, and urogenital tract [2]. Nasal myiasis is relatively rare in developed nations but is not uncommon in Nepal as it is a tropical country. Common presentations are foul smelling nasal discharge, epistaxis, swelling of nose and surrounding areas of face. However, extension of nasal myiasis into palate is relatively rare. We present a case of nasal myiasis presented with epistaxis along with palatal perforation.

CASE PRESENTATION

A 47 years old female from remote village of Dhanusha was brought to emergency with complaints of recurrent left nasal bleed for 5 days. The epistaxis was recurrent, spontaneous,

few drops only and stops spontaneously. There was history of partial left nasal obstruction along with foul smelling nasal discharge. There was no history of recurrent sneezing, itching, and trauma. Past history was insignificant and no history of drug intake either.



Figure 1: palatal perforation after removal of slough



Fig 2: Multiple maggots in left nasal cavity

On examination patient was conscious, cooperative and well oriented. There was no pallor and vitals were within the normal limit. On local examination of nose and paranasal sinuses there was foul smelling discharge in the left side of nasal cavity with clots and maggots were visualized. On examination of oral cavity there was 8mm*8mm perforation in left side at the junction between hard and soft palate. The perforation was covered with slough which was removed (fig 1). On endoscopic examination there were many maggots in the left nasal cavity (fig 2).

All the visible maggots were removed. Later on the bleeding was gradually controlled. Patient was advised for imaging of nose and paranasal sinuses. The imaging showed soft tissue densities in the bilateral nasal cavity with erosion of nasal septum, hard palate and soft palate with oronasal fistula formation. All the paranasal sinuses were normal. There were soft tissue densities in bilateral anterior and posterior ethmoidal sinuses, frontal sinuses suggestive of secretions collection and thickening of mucosa in bilateral maxillary sinuses.



Fig 3: hard palate destruction in CT scan

Patient admitted with intravenous ceftriaxone and metronidazole, daily examination and removal of maggots. After one week of admission all the larva were removed and she also improved with no further nasal bleed and nasal discharge. Patient's general condition improved and discharged on oral antibiotics, nasal douching and kept on regular follow ups. The patient was planned for closure of Oronasal fistula after 6 months.



Fig 4: Reconstructed CT scan showing destruction of nasal septum

DISCUSSION

The term myiasis was coined by F.W. Hope in 1840, it was first described by Laurance in 1909. Nasal myiasis is a common disease in tropical and developing countries like Nepal. Infestations of the nose could be dangerous because of the possibility of penetration into the brain, and there is a fatality of 8% in such cases [3]. The maggots may spread laterally and posteriorly to the orbit and paranasal sinuses and in a few instances may spread inferiorly and perforate the palate [4].

Myiasis is usually initiated when flies are attracted by a wound and lay their eggs in necrotic, haemorrhagic or pus-filled lesions [5]. The larval stage lasts from six to eight days in which period they are parasitic to human beings. They are photophobic and therefore tend to hide themselves deep into the tissues and also to secure a suitable niche to develop into pupa. Secondary bacterial infections are common. All conditions compromising bodily integrity predispose to infestation [6]. The parasites are quite mobile and their clinical signs and symptoms always appear suddenly. The main symptoms are a foreign-body sensation and itching in the throat, followed by cough and other respiratory and nasal manifestations such as nasal discharge, epistaxis, sneezing, laryngospasm, dyspnoea and stridor [7].

The larvae release toxins to destroy the host tissue [8]. Sometimes may result life threatening haemorrhage [9]. The continuous nasal bleeding and intense halitosis seen in the present case are suggestive of the destruction caused by toxins released by the larvae. Progressive destruction and cavitations occur as the larvae grow in body tissue. The host also responds by creating a fibrous capsule to which the larvae can become tightly attached.

When multiple maggots are detected, as in the present case, turpentine is used as it irritates and forces them out of hiding. Treatment consists of

manual removal of maggots, broad-spectrum antibiotics. Systemic prescription of oral ivermectin can be used in severe cases [1, 10], which is a semi-synthetic macrolide antibiotic derived from *Streptomyces avermitilis*, often results in recovery of patients. It acts by blocking the nerve impulses on nerve endings through the release of gamma amino butyric acid, which leads to paralysis and subsequent death of the parasite.

CONCLUSION

Myiasis is rare condition and cases with palatal perforation even extremely rare. Prompt diagnosis with treatment is necessary to prevent fatal complications.

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REFERENCES

1. Sharma J, Mamatha GP, Acharya R. Primary oral myiasis: A case report. *Med Oral Patol Oral Cir Bucal* 2008; 13(11): 714-716.
2. Pandey A, Madan M, Asthana AK, Das A, Kumar S, Jain K. External ophthalmomyiasis caused by *Oestrus ovis*: a rare case report from India. *The Korean J of parasitol* 2009; 47(1): 57-59.
3. Altinta K, Haberal M. A case of human orotracheal myiasis caused by *Wohlfahrtia magnifica*. *Parasitology Res* 1997;1(83): 34-36
4. Thomas S, Nair P, Hegde K, Kulkarni A. Nasal myiasis with orbital and palatal complications. *BMJ case reports* 2010.
5. W P, *Infectious Diseases*. 1st ed. Philadelphia, PA, USA Churchill Livingstone Elsevier; 1999. 1-6 pp.
6. Mallon PW, Evans M, Hall M, Bailey R. Something moving in my head. *The Lancet* 1999; 354(9186): 1260.

7. Aydin E, Uysal S, Akkuzu B, Can F. Nasal myiasis by fruit fly larvae: a case report. *European Archives of Oto-Rhino-Laryngology and Head & Neck*. 2006; 263(12): 1142-1143.

8. Sood V, Kakar P, Wattal B. Myiasis in otorhinolaryngology with entomological aspects. *The J of Laryngology & Otology* 1976; 90(04): 393-399.

9. Shinohara EH, Martini MZ, Oliveira Neto HGd, Takahashi A. Oral myiasis treated with ivermectin: case report. *Brazilian dental J* 2004; 15(1): 79-81.

10. Candamourty R, Venkatachalam S, Yuvaraj V, Sujee C. Oral myiasis in an adult associated with filariasis and Hansen's disease. *J of Natural Sci, Bio and Med* 2013; 4(1): 259.