Case Report

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An uncalled guest in the nose: a living leech

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ABSTRACT

Foreign bodies in the nasal cavity are commonly encountered as a cause of epistaxis; especially in children. Leeches are most common parasite found in hilly areas in India, particularly in rainy season. However, nasal leech infestation (animate foreign body) as a cause of unilateral persistent epistaxis is very rare. We, herein present a case of nasal hirudiniasis in a 30 year old female. She presented with history of recurrent epistaxis with moving sensation and itching in the left nose. Examination of nose showed a moving fleshy mass, which was a leech and was removed with a Luc's forceps In developing countries, leech infestation as a cause of epistaxis should be suspected in patients with lower socioeconomic status or in those living in leech predominant areas, rural areas who give history of drinking polluted water from, or bathing in, stagnant ponds and puddles.

Keywords: Animate foreign body, Epistaxis, Foreign body, Leech, Nasal hirudiniasis

INTRODUCTION

Foreign bodies constitute a common cause of unilateral persistent bleeding in children. However foreign bodies causing unilateral persistent bleed are rare in adults especially due to leech endoparasitism. In literature there are only few reports of nasal hirudiniasis. Most case reports pertain to rural areas with the affected individuals having taken a bath in ponds and puddles. Sometimes the patient may present with persistent epistaxis and may require blood transfusion. In this case the female presented with persistent epistaxis similarly.

CASE REPORT

A 30 years old female patient from a rural district came to Department of Otorhinolaryngology and Head and Neck Surgery OPD with the complaint of unilateral (right

side) recurrent epistaxis since a week. The patient complained of nasal irritation and moving sensation in the right side of nose. She gave a history of bathing in a temple pond on the day the bleeding started. She had been prescribed xylometazoline nasal drops and oral pseudoephedrine; however, these did not result in improvement. She did not give history of inserting any foreign body in the nostril, fever, runny nose or similar episodes of epistaxis in the past. Physical examination revealed that the patient was in agony and was crying with pain. She had pallor and fresh blood was persistently oozing from the right nostril. Her vitals were stable. Local pressure and cold compression with head end elevation did not help in controlling the epistaxis.

Examination of the nasal cavity in Operation theatre revealed a soft brownish red fleshy material bulging into the right nostril close to the inferior turbinate. Attempt

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was made to pull it out with the help of an artery forceps. However, being a slimy structure, it repeatedly slipped from the grip of artery forceps and appeared to be tightly stuck to the inferior turbinate. Then Luc's forceps was used to hold the slimy creature, which was identified as leech infesting the right nostril (Figure 1 and 2). Since repeated attempts to dislodge the leech by forceps failed, irrigation of the right nostril with normal saline was done and it was decided to wait and watch. After a few minutes, it could be easily dislodged with the help of forceps. The leech was still alive and was 8 cm long (Figure 3). After a few minutes, the bleeding from the right nostril also decreased. Right nostril was packed with gauze piece and patient was put on oral ciprofloxacin 500mg tablets, systemic decongestants and intramuscular tetanus toxoid was given. Haematological investigations revealed haemoglobin to be 7.0 g/dL and total leukocyte count, 10,800/mm³. Other ENT examination was normal. Nasal packing was removed the next day, and she became completely asymptomatic. She was advised precautions of not to take bath in polluted stagnant ponds or drink water from the open ponds and to report immediately to the emergency department if similar complaints arose.



Figure 1: Leech grasped with lucs forceps.



Figure 2: Leech still stuck to inferior turbinate despite recurrent attempts.

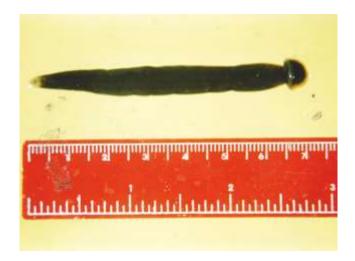


Figure 3: Measurement of removed leech.

DISCUSSION

Orificial hirudiniasis is a condition in which a leech enters the body orifices, most often the nasopharyngeal region; however, some cases of leeches infesting the urethra, vagina, rectum or even eyes have been reported.

Leeches are blood-sucking hermaphroditic parasites that attach themselves to the vertebrate hosts, bite through the skin and suck out blood. Common species that infest humans are *Dinobdella ferox*, *Hirudinea granulosa and Hirundinea viridis*. Both aquatic and land leeches are known to attack humans by drinking infested water from/taking bath in stagnant streams, pools and springs. The host does not resist the infestation because the saliva contains a local anaesthetic obviating any pain while feeding. In addition, the saliva contains the compound which is a potent anticoagulant along with a vasodilator which increases the supply of blood to the parasite.

Leech infestation may cause serious complications like airway obstruction, severe respiratory distress, hemoptysis or hematemesis.³ Leeches attach to the tissue by two muscular suckers, use three teeth inside their anterior sucker for biting and blood is sucked into stomach by peristalsis. Leeches can ingest large amounts of blood into their stomach, which may weigh 8 to 9 times their body weight, and may cause severe anemia in the host.⁴ Because leech bites are painless, infestation may remain symptomless until a warning sign appears. Epistaxis, nasal obstruction and sensation of a moving foreign body are common presenting complaints of leech infestation in the nose. In addition leeches have been known to infest in nasopharynx and in larynx presenting with respiratory distress, hoarseness and hemoptysis.

Leech infestation primarily occurs in tropical areas such as Mediterranean countries, Africa and Asia. Cases of nasal leech infestation have been reported from various parts of India, Pakistan and Nepal. Direct removal of leech might be difficult because of its powerful attachment to the nasal mucosa and its slimy and mobile

body. Various innovative techniques have been used for treatment of nasal leech infestation. These include a) anterior rhinoscopy along with suction; and b) wait-andwatch policy - water is taken in a kidney tray and placed with water level 1 cm below nasal vestibule. In a comparative study of these two methods of treatment of nasal leech infestation, the method involving a wait-andwatch policy was found to be a better technique. As soon as leech is seen coming out from the nasal vestibule towards the water, it is caught with artery forceps and gently pulled out. The removal is faster with the former technique; however, it is associated with more bleeding and pain. The method involving a wait-and-watch policy is a better technique and causes less pain and less blood loss, but it is more time consuming.

Besides this, various substances can be used to tranquilize leech before removal. Irrigation with strong saline, vinegar, turpentine oil or alcohol may be used for removal of leech. It can also be detached by applying 30% cocaine, 1:10,000 adrenaline or dimethyl phthalate. 6

CONCLUSION

Leech endoparasitism as a cause of nose block and epistaxis is very rare. Due to the presence of anticoagulant in the saliva of leech, bleeding may be persistent. Because the nasal cavity is not readily visualized, rhinoscopy is generally required for diagnosis. However, it may not be possible in an emergency setup. Hence high index of suspicion is required in a patient of lower socioeconomic strata from a rural area presenting with unilateral continuous epistaxis with history of drinking polluted water from ponds or bathing in ponds. In addition nasal endoscopy and laryngeal endoscopy may be done to rule out additional manifestation.

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REFERENCES

- Bishop WJ. The Story Behind the Word: Some Interesting Origins of Medical Terms. Harry wain, Springfield, Illinois: C.C. Thomas; Oxford: Blackwell Scientific Publications; 1958: 342-6.
- 2. Aggarwal KK. Living leech in the nasopharynx. Indian J Otolaryngol. 1977;29(4):200
- 3. Hatua NR, Kundu N. Living leech in subglottic space. Indian J Otolaryngol. 1976;28(3):142-3.
- 4. Kumar S, Dev A, Kochhar LK, Singh AM. Living leech in nose and nasopharynx-An unusual foreign body. Indian J Otolaryngol. 1989;41(4):160-1.
- Williams A, Marshal. Textbook of Zoology Invertebrates. 7th ed. Lincoln, United Kingdom: Mac Millan. 1972: 361-4.
- Marwaha AR, Bawa GS, Duggal KK. An unusual response of a leech to premedication. Indian J Otolaryngol.1977;29:199-201.
- 7. Mann KH. Leeches (Hirudinea) their structure, physiology, ecology and embryology. New York, Pergamon Press. 1923: 99-105.
- 8. Saltzberger M. Leeches as foreign bodies in the upper air passages in palistino. Laryngoscope.1928;38:27-32.
- 9. Verma PL, Kohli GS. Leech: a rare cause of epistaxis. J Laryngology and Otology. 1970;84:91-2.

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