

Case Report

Extraction of live leech from nasal cavity: an interesting case report from a rural area hospital

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Abstract:

Introduction: Leeches are blood sucking invertebrate parasites. They are endemic in tropical regions like Asia, Africa and Mediterranean countries with different colors and sizes. Entry into human body is through drinking polluted water. These inhabit mucosa of nose, nasopharynx, oropharynx, tonsils, esophagus but rarely larynx.

Case report: Here we report a case of live leech in the left nasal cavity in a 40-year-old male that caused symptoms of watery discharge and occasional epistaxis from left nostril along with headache. Habitual drinking of water from a natural source of water was assumed as the cause of leech infestation. The leech was extracted finally from oropharynx, with great effort as it continuously changed its locations.

Conclusion: Leech infestation must be kept as differential diagnosis for various foreign bodies in the respiratory tract causing, unusual respiratory distress and epistaxis, especially in rural area people, where drinking water from natural sources of water is a regular habit.

Key words: Leeches; tropical; epistaxis

Introduction:

Leeches are parasites, belonging to the phylum Annelida and class Hirudinea¹. These are of varied shapes, colors and sizes and may be classified as: land leeches and aquatic leeches. Aquatic leeches are worldwide in distribution²⁻³. Ectoparasitism by

leeches is frequent occurrence in rural areas. But infestation into the body is rare and is mainly through habitual drinking of water from springs, or taking bath in infested water sources, a common practice in these areas⁴. These parasitize and usually localize on the mucosa of orifices of pharynx, esophagus, nose or nasopharynx⁴⁻⁵. This phenomenon is known as hirudiniasis. They secrete an anticoagulant (hirudin), to feed and obtain a full meal of blood causing significant symptoms of hemoptysis and/or epistaxis²⁻⁴. Serious complications like dyspnea and hematemesis can also occur^{2, 6, 7}. Here we bring an interesting case report of a live leech, which infested left side of nose for seven days and was extracted finally from oropharynx through oral cavity because of its mobility.

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Case report:

A 40-year-old patient reported to ENT OPD of rural area hospital in Solan district, of Himachal Pradesh, India in the month of May 2012, with chief complaints of watery discharge, foreign body sensation and occasional epistaxis from left side of nose with headache for seven days. There was no history of fever or bleeding from any other site in the body. Past history and family history was not significant. He told that he himself could see a black mass in the rear end of the left side of nostril in mirror. There was history of drinking water frequently from natural source of free flowing water by using his hands, common practice of drinking water in rural hilly areas of the state.

On general physical examination he was a moderate built person and had mild pallor. Blood investigations showed mild normocytic hypochromic anemia with other investigations within normal limits. On local examination by anterior rhinoscopy, black moving organic mass could be noticed on the posterior end of left nostril with surrounding mucosa, slightly congested. Keeping differential diagnosis of leech as a foreign body in mind, xylocaine packing of the left nasal cavity was done and kept for about 10 minutes. Packing was then taken out and again local examination was done and to our surprise leech like mass came slightly to the anterior, which was tried to be extracted by Tilley's forceps but to no use, as it disappeared from that nare. Examination was done of the right nostril and at the posterior nasopharyngeal wall the black mass was noted. Saline was instilled in the nostril. Again black mass disappeared from both nostrils. Now examination was done of oral cavity and oropharynx and the mass could be localized in oropharynx. Finally it could be extracted as a whole from the oropharynx through oral cavity with the help of Tilley's forceps from

oropharynx by holding its one end. Final diagnosis matched our differential diagnosis as it was a live leech of about 7 cms in length and 1cm in breadth (Figure 1). Patient was put on nasal decongestants and antibiotics. That is how besides limited resources in rural hospital, we succeeded in our task.



Figure 1: Showing the leech.

Discussion:

Leeches are blood-sucking hermaphroditic parasites belonging to annelida species of helminths. Leech infestation is common occurrence in tropical areas such as Mediterranean countries of Africa and Asia⁸. Common species infesting humans are *Dinobdella ferox*, *Hirudinea granulosa* and *Hirundinea viridis*. Both aquatic and land leeches attack humans. Leeches are reputed to be dangerous parasites because of feeding externally on blood, often from human hosts. Infestation into the body occurs by drinking infected water from, or taking bath in, stagnant streams, pools and springs. This leads to official hirudiniasis i.e. the condition in which leech enters orifices especially the nasopharyngeal region. In this case also the patient was habitual of drinking water from spring water of his village.

Leeches attach to the mucosal surfaces by two muscular suckers, having three teeth inside their anterior sucker for biting and blood is sucked into stomach by peristalsis. Leeches can ingest blood up to 8 to 9 times of their body weight, and may cause severe anemia in the host⁹. Leech bites are painless, due to release of saliva that has local anesthetic property¹⁰. Therefore infestation may remain symptomless until the appearance of warning sign. Common presenting complaints of nasopharyngeal leech infestation are epistaxis, nasal obstruction and sensation of a moving foreign body. The saliva of leech contains hirudin, inhibiting thrombin in the clotting process; and histamine-like substances leading to continuous bleeding by causing vasodilatation. Leech infestation may cause serious complications like airway obstruction, severe respiratory distress, hemoptysis or hematemesis¹¹. The clinical presentations matched the features of leech infestations in this patient also.

Direct removal of leech poses difficulty because of its powerful attachment to the mucosal surface, besides its slimy and mobile body. Therefore removal can be facilitated by applying salt, vinegar or alcohol to the mucosa. Removal of leeches from nasopharynx can be done under local anaesthesia or direct laryngoscopy under general anaesthesia³. In our case we were able to extract live leech as a whole from oropharynx with great difficulty with the application of local anaesthesia, as well as saline in a limited setup of rural area hospital.

To conclude, leech infestation should be kept as differential diagnosis of foreign body and epistaxis in patients in rural areas who give history of drinking polluted water from, or bathing in, stagnant ponds and puddles. By proper history taking and vigilant extraction one can succeed in the management of case of orificial hirudiniasis even in hospitals with limited set up. Thus timely management can avoid patient's referral to higher institutes, besides preventing further complications of leech infestation.

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