

Leech” an unusual cause of epistaxis in hilly areas of India

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ABSTRACT: Introduction- Leeches are segmented parasitic or predatory worms that belong to the phylum Annelida. The majority of leeches live in freshwater habitats. When water that includes young leeches are drunk without necessary caution, leeches enter through the mouth and attach themselves on the upper respiratory system or digestive system mucosa.

Case report-We are reporting four cases of epistaxis at different ages who has reported to ENT OPDs at one of hilly areas of India. All the patients have common history of drinking water directly by making cup of hands from natural source of water.

Discussion -leeches secrete an anticoagulant hirudin which allow it feed on its host freely. Endoscopic examination may be required in paediatric age group to confirm the diagnosis. Prolonged infestation may lead to anaemic condition .

Conclusion- unilateral epistaxis should raise high suspicion of leech infestation especially in hilly areas and it should be treated as an emergency.

I. INTRODUCTION

Leeches are segmented parasitic or predatory worms that belong to the phylum Annelida and comprise the subclass Hirudinea. They are closely related to the oligochaetes, which include the earthworm, and like them have soft, muscular, segmented bodies that can lengthen and contract. The majority of leeches live in freshwater habitats, while some species can be found in terrestrial and marine environments. The best-known species, such as the medicinal leech, *Hirudo medicinalis*, are hematophagous, attaching themselves to a host with a sucker and feeding on blood, having first secreted the peptide hirudin to prevent the blood from clotting. The jaws used to pierce the skin are replaced in other species by a proboscis which is pushed into the skin. Leech infestations occur more commonly in tropical regions like Mediterranean

countries, Africa and Asia [1]. When water that includes young leeches are drunk without necessary caution, leeches enter through the mouth and attach themselves on the upper respiratory system or digestive system mucosa. These locations are mostly the nose, nasopharynx, oropharynx, tonsils, esophagus and rarely larynx mucosa [2,3]. We are reporting four cases of epistaxis at different ages who has reported to ENT OPDs at one of hilly areas of India. All the patients have common history of drinking water directly by making cup of hands from natural source of water. All patients presented in ENT OPD with complains of unilateral nasal bleed ,watery nasal discharge,purplish soft mass protruding from same anterior nares off and on.No history of sneezing was present.

II. CASE REPORTS

Case 1

On august 2015 a male child of 6 yrs presented in ent opd with history of bleeding from left nostril form 15 days.History of watery discharge from same nostril was present.Patients mother was giving history of dark red soft mass protruding from nasal cavity off and on. History of drinking water directly from water spring by making cup of both hands was there. No history of trauma to nose was positive. Endoscopic examination was planned under general anaesthesia. Blood investigations were unremarkable. On endoscopic examination leech was lying in the middle maetus which was moved out with blakesley forcep. Patient discharged on next day.

2nd case

On april 2016 a male patient of 44 yrs, shepherd by profession presented to ent opd with history of nasal bleed from 3 months from left nostril. Patient used to go into jungle to graze

sheeps and used to drink water from water springs directly. No history of trauma to nose ,sneezing or bleeding from any other body part was present. Anterior rhinoscopy was showing a leech attached to inferior turbinate,moving backward on exposure to light. Right nasal cavity was packed with cotton pack soaked into 4% lidocaine. Small cotton pack soaked with 4% lidocaine was kept at the floor of left nasal cavity for 10 minutes. After removing the pack kept on floor of left nasal cavity the leech was held with blakesley forcep and taken out.

3rd case

On July 2017 a female patient of 34 yrs presented with history of bleeding from right nostril from one week. She also gave history of dark red mass protruding from right nasal cavity off and on . On anterior rhinoscopy the leech was not visible. Oral and oropharyngeal examination was normal. Both nasal cavities were packed with cotton pack soaked with 4% lidocaine. After five minutes patient was again examined. Anterior rhinoscopy was normal,on oropharyngeal examination the leech was hanging from nasopharynx along posterior pharyngeal wall. It was taken out with artery forcep.



Fig –leech removed from 3rd patient

4th case

On September 2017 a female patient presented with history of bleeding from left nostril from one month with history of dark mass protruding from right nasal cavity off and on. On anterior rhinoscopy part of leech's body was visible at nasal vestibule. The leech was held with artery forcep and pulled out.

III. DISCUSSION

Leeches are segmented parasitic or predatory worms that belong to the phylum Annelida and comprise the subclass Hirudinea. They are closely related to the oligochaetes, which include the earthworm, and like them have soft, muscular, segmented bodies that can lengthen and contract. Leeches live in brooks, rivers and pools.

The parasitic forms of leeches in humans are called hirudiniasis . All the patient in our study are belonging to hilly areas with poor economic status ,all has history of drinking water directly from water source by forming cup of hands. Habit of drinking water in this style gives easy access to anterior nares. As the size of leech is very small before getting access into human body,hence not noticed by the patient.In all our patients the leech was extracted from nasal cavity and nasopharynx,however it may get attached to mucosa anywhere in upper aerodigestive track. These locations are mostly the nose, nasopharynx, oropharynx, epi-glottis, larynx and upper trachea [4. Leeches attach the mucosa by their large muscular sucker on the tail and bite by their anterior sucker. Their three small jaws bite on the host forming three lines. They secrete an anticoagulant substance containing hirudin, which inhibits the thrombin, factor IXa and other enzymes. These anticoagulants enable the leech to feed on its host freely. If a foreign body in the nasal cavity is a leech, it presents an emergency that requires immediate attention, because after leeches attach themselves to a mucous membrane, they can suck blood up to approximately nine times their own body weight [4,5]. They may cause severe anemia, which may require blood transfusion [6,7]. Cundall et al [8]. reported the death of one of their six cases due to severe anemia.

When the leech is localized in the nasal cavity it may easily be diagnosed as it keeps protruding out from anterior nares off and on as a dark red mass. However patient may also present with epistaxis when leech is lying in the nasopharynx and it may need endoscopic examination to confirm its presence and removal. In case of children as in our first case anterior rhinoscopy could not be done as child was not cooperative. The nasopharyngeal examination should be performed under general anesthesia in children while possible causes of epistaxis are investigated. When the leech is found attached to the oropharynx, it may be easily removed by using forceps. Necessary caution and attention should be paid while removing the leech from its location; because it has a slippery body surface which can easily be ruptured [9]. In our study in the first case leech was removed endoscopically under general anaesthesia,rest of three cases were treated as opd cases.

In conclusion, although leeches are rarely observed in the respiratory system, it may

occasionally cause life-threatening complications if it is not accurately diagnosed. Therefore, leech infestation should be considered in the presence of unexplained hemoptysis, epistaxis or anemia in leech- endemic areas. Endoscopic evaluation of nasal cavity is mandatory for the definitive diagnosis if not diagnosed on anterior rhinoscopy. Due to contamination risks, people living in rural areas should use natural spring water after boiling and filtering them.

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