Otolaryngology online journal

Volume 2 issue 1

Leech Inside Nasal cavity a difficult foreign body an interesting case report and review of literature

Dr E Sivakumar, Dr T Balasubramanian

Abstract:
This article describes a live leech inside the nasal cavity of a patient who presented with epistaxis. This case is reported in order to create awareness of this condition as well as to discuss the practical difficulties in removing these live foreign bodies from nasal cavities. A review of pulished material on this subject illustrated lack of scientific model pertaining to the best removal methodology to be followed. The methods described in literature bears testimony to the innovative skills of the surgeon rather than evidence based practice. It should also be stressed that ill advised removal methods could proove counterproductive.

Introduction:

Presence of animate foreign body [1] causing epistaxis is rather rare. Practitioners in non leech infested areas may not be aware of such conditions [2.] Leech infestation is common in tropics and mediterranean countries, Africa and Asia. Usually leeches enter nasal cavity when the patient takes bath in leech infested lakes / ponds. [1] Leeches are blood sucking hermaphrodite parasites which vary in color and length. The length of leeches could vary anywhere between few centimeters to half a meter[3]. Leeches on entering the human body tends to localize in the mucosa of oropharynx, nose, nasopharynx, tonsils, esophagus etc [4].
Direct removal of leech from nasal cavity could be troublesome because of its powerful attachement to nasal mucosa and the presence of slippery slime over its body [5.] Damaging a leech may cause it to regurgitate its bacteria filled stomach contents into the wound adding to the already existing problems [6.]

Case report:

35 years old male patient came with complaints of:

Bleeding from right nasal cavity – 10 days duration (Intermittent in nature)
Nasal obstruction on the right side – 10 days duration
Mucoid discharge from right nose – 10 days

Pain and swelling over dorsum of nose – 10 days

Patient had seen multiple ENT sugeons and was treated for acute sinusitis.
Initial working diagnosis made was – Acute sinusitis.

X-ray paranasal sinuses revealed mucosal congestion inside the right nasal cavity.
Diagnostic nasal endoscopy was performed and it revealed a live leech attached to nasopharynx. Under general anesthesia, patient's nasal cavity was sprayed with topical xylocaine 10%. This spray has dual advantages. It not only anesthetises nasal mucosa but also causes the leech to loose its grip from the nasal mucosa. The leech was removed using 4mm 0 degree nasal endoscope.

Plate showing leech inside nasal cavity

Plate showing removed leech

Discussion:

Leeches are blood sucking annelids belonging to the subgroup called Hirudinea. Hirudiniasis is the term used to indicate leech invasion of body cavities. The species *Dinobdella ferox* (ferocious leech / nasal leech) are known to invade the nasal cavity and airways. These leeches can be classified as:

1. Fresh water leeches
2. Terrestrial leeches
3. Marine leeches

This classification is actually based on their habitat. Leeches are common in still waters than flowing ones. Hence care should be taken while bathing in ponds and lakes. When leeches get attached to mucosal surface it begins to secrete its saliva. Saliva of leeches are supposed to contain local anesthetic material which blunts mucosal sensation in their hosts. The saliva of leeches also contain a unique substance known as Hirudin which is a very potent anticoagulant which prevents blood coagulation enabling them to feed voraciously. Their saliva also contains a potent vasodilator which keeps the blood supply to the area increased.

Leeches are known to ingest blood equivalent to 890% of their body weight, [7] hence affected individuals may suffer from severe anemia even to the extent of needing blood transfusion. [8] A high index of suspicion is necessary to diagnose leech infestation.

Advised procedure for removal:

Leeches have a tendency to release their bite when exposed to methanol [6.] This is commonly used for the purpose of removing leeches. Use of topical anesthetic agents like cocaine / lignocaine can cause paralysis of leech facilitating easy removal. Two innovative procedures / techniques [9] have been followed in removing leech from nasal cavity with equal success.

1. Sucking out leech from the nasal cavity using a powerful suction
2. By holding a kidney tray filled with water in front of the nasal cavity of the patient. Leeches can sense fresh water. Leech inside the nasal cavity will start to migrate towards water contained in the kidney tray. As soon as it reaches the vestibule of the nose the same may be removed with the help of a forceps.

Conclusion:

Following caution won't be out of place:

1. Leeches should be removed promptly because prolonged exposure may cause infections and anaemia due to blood loss.
2. Leech bite causes intense itching due to exposure to its saliva
3. Leeches should not be removed using intense irritants / caustic agents like salt or by burning

because these methods may cause leech to increase its bite and regurgitate their stomach contents which could contain harmful bacteria.

4. Even after removal of leech the wound will continue to bleed for sometime

References:

1. C.K. Chow, S.S. Wong, A.C. Ho, S.K. Lau, Unilateral epistaxis after swimming in a stream, Hong Kong Med. J. 11 (2005) 110–112.
2. M.E. EI-Award, K. Patil, Haematemesis due to leech infestation, Ann. Trop. Paediatr. 10 (1990) 61–62.
3. M.E. EI-Award, K. Patil, Haematemesis due to leech infestation, Ann. Trop. Paediatr. 10 (1990) 61–62.
4. C. Bilgen, B. Karci, U. Uloz, A nasopharyngeal mass: leech in the nasopharynx, Int. J. Pediatr. Otorhinolaryngol. 64 (2002) 73–76.
5. Pandey CK, Sharma R, Baronia A, Agarwal A, Singh N. An unusual cause of respiratory distress: live leech in the larynx. Anesth Analg 2000;90:1227-8.
6. Unique case of Leech inside nasal cavity http://www.drtbalu.com/leach_nose.html
7. al-Hadrani A, Debry C, Faucon F, Fingerhut A. Hoarseness due to leech ingestion. J Laryngol Otol 2000;114:145-6.
8. Cundall DB, Whitehead SM, Hechtel FO. Severe anaemia and death due to the pharyngeal leech Myxobdella africana. Trans R Soc Trop Med Hyg 1986;80:940-4.
9. Nasal leech infestation in children Prakash Adhikari International Journal of Pediatric Otorhinolaryngology 73 (2009) 853–855