Endoscopic Removal of Intranasal Leeches

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Abstract

Foreign bodies in the nasal cavity are commonly seen in an ear, nose and throat outpatient department but animate foreign bodies are less frequently encountered. Leech infestation of the nasal cavity are rare. This paper will report two cases which presented as epistaxis. The leeches were identified and removed under local anesthesia in the office. In tropical regions, animate foreign bodies should be considered in the differential diagnosis of epistaxis.

Introduction

Foreign bodies inside the nasal cavity are commonly seen in an otolaryngologists office practice. Usually children present with foreign bodies in the nose but they can also be seen in adults particularly those with mental retardation and also in patients with depression. Foreign bodies in the nasal cavity can be a great challenge to remove and the management will often require a skilled endoscopists. Foreign bodies can be a common cause of intermittent unilateral epistaxis with serosanguineous discharge. Both animate and inanimate foreign bodies can be encountered but a leech as a cause of epistaxis is uncommon.1

Case Report: A 35 year old male, otherwise apparently healthy, reported to the E.N.T. outpatient department with the complaint of unilateral bloody discharge, an odd sensation of something creeping in the nose and slight occasional unilateral blockage for one week duration. The patient felt he had a leech in his nasal cavity because he had a history of drinking water from an open stream in an area where leeches are quite common. The patient belonged to a hilly area of District Sirmour from Himachal Pradesh. Some shady moist areas in this region have abundant leeches, harboring in the open water springs.

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On examination by anterior rhinoscopy no apparent foreign body was seen in the nasal cavity. The right nostril was full of blood stained mucoid discharge. The secretions were removed with the help of suction and again the cavity was examined but no foreign body could be visualized. Posterior nasopharyngoscopy was also normal. Diagnostic nasal endoscopy with a 4 mm 0 degree endoscope was performed under topical anesthesia. A blackish brown mass was seen moving high up on the septum and hidden behind the middle turbinate. The upper attachment could not be seen. A cupped endoscopic forceps was introduced into the nasal cavity and the foreign body was grabbed and removed. The foreign body turned out to be a leech, which was still alive and measured approximately 3 inches in length. Xylometazoline drops were instilled into the patient’s nose and the patient had no bleeding. The patient’s symptoms resolved after removal of the leech.

A similar case of a 7 year old girl, with similar complaints and no finding on anterior and posterior rhinoscopy. When examined endoscopically, a live leech in the nasal cavity was found and removed under topical anesthesia. There were no postoperative squealae.

Fig.1. Live Leech removed from nasal cavity

Discussion

One needs to remember that if one foreign body is placed by the patient in one body cavity, that the patient may have placed other foreign bodies in other body cavities. Thus, in the case of a suspected foreign body in the nasal cavity, a thorough history and physical examination must be performed.

Radiological examination may also be helpful to identify opaque foreign bodies and dye instillation into the nasal cavity for nonopaque foreign bodies can be used. Nasal endoscopy has revolutionized the diagnosis and treatment of foreign bodies.

Foreign bodies in the nasal cavity can be categorized into animate foreign bodies and inanimate foreign bodies. The inanimate foreign bodies can be either organic or nonorganic. Among organic inanimate foreign bodies, endogenous materials such as bones or pieces of cartilages can be left behind following surgical intranasal interventions. Vegetable foreign bodies such as beans, peas, nuts and seeds should be promptly removed since they will swell and putrefy.
Nonorganic materials such as, chalk, beads, drawing pins, pieces of rubber erasers, washers, eyelets, buttons, brass studs, sponges, corks, and cardboard discs have also been placed into the nasal cavity. Even a door handle, bullets, thimble, iron bolts, coins and a pencil have been recovered from the nose. One of the most dangerous nonorganic foreign bodies are button batteries. Batteries can rapidly corrode and cause extensive burning and necrosis of the nasal septum, turbinates and sinuses.2

Among the animate foreign bodies most medical texts report nasal myiasis as the commonest cause of unilateral epistaxis. Myiasis is caused by the larvae of a two-winged fly (diptera) feeding on necrotic tissue. These parasites are also referred to as maggots. Although some species will remain and only feed on dead tissues of wounds, others invade healthily tissue. In the nose, infestation is dangerous because of the possibility of CNS extension.3

Only a few studies in the literature have reported leech infestation as a cause of epistaxis.4-6 Several other studies have also reported cases of leeches in the nasal cavities.7-10 Leeches can enter the maxillary sinus through the natural or a surgically created ostium and then they can be very difficult to remove. They can become dislodged from the nasal cavity and enter the subglottitic area causing dyspnea, cough and creating a life-threatening situation.11-15

Leeches are annelids belonging to the subgroup Hirudinea. They can be classified into fresh water, terrestrial and marine according to their habitat. A few of them are hemorrhagic parasites feeding on the blood of animals. They are hermaphrodites. Hirudiniasis is the term used to indicate the invasion of the body cavity or infestation by leeches. The species Dinobdella ferox (ferocious leech or nasal leech) are known to invade the nasal cavities.

Leeches attach themselves to human beings either on skin or the mucous membrane with the help of their caudal end and ingest blood by their suction appendage. A single leech can ingest ten times it’s body size in blood. The saliva of the leech contains a local anesthetic that limits the sensation to the host, thus the host does not attempt to remove it. The saliva also contains a potent vasodilator and also an anticoagulant called hirudin. Thus, the dilated vessels enable the leech to suck more and more blood without clotting.

When other methods of examination do not reveal a foreign body, as reported in these two cases, an endoscopy can be of great help. Though, home remedies of instillation of saline drops, citric acid or 50% alcohol gargling may be tried by some patients, they should be used with great caution since these can cause the accidental passage of the leech into the airway with life-threatening results. Such cases are best left to the otolaryngologist and this applies to all nasal foreign bodies.

Conclusion

Hence, leeches as an animate foreign body should always be kept in mind while treating a patient with features suggestive of foreign body reporting from an area where springs and ponds are common. A thorough exam should be performed and if anterior rhinoscopy is negative a diagnostic endoscopy should be performed as leeches are known to attach to the posterior part or high up on the nasal septum or the lateral nasal wall. In tropical regions, animate foreign bodies should be considered in the differential diagnosis of epistaxis.

References


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