

Alive leech in the airway: a case report

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Abstract

Airway foreign bodies are common problems in children. However, they can also occur in adults, albeit less commonly. These are usually inanimate objects but sometimes, animate objects may also be 'inhaled', and these can rarely include live creatures! In this report, we discuss an interesting case of a live leech in the airway that we managed in our center.

Keywords: Airway Foreign body; Bronchoscopy; Leech.

Introduction

Airway foreign bodies are common problems in children. However, they can also occur in adults, albeit less commonly. In adults, the most vulnerable are unconscious patients, those under the effect of alcohol or anesthesia, demented and those with chronic neurological illnesses, and those undergoing dental procedures. However, foreign body aspiration can occur even in the absence of those risk factors. ¹ Usually aspirated are inanimate objects like whistles, buttons, seeds, peanuts, and beans. ^{1,2} In a retrospective series 91% of the foreign bodies in children and 59% of them in the adults were organic inanimate objects.¹ Alive creatures in the airway are truly rare occurrences. The most common such endoparasites are reported to be a fish, leech, and roundworms.² Alive leeches in the subglottic airway are even rarer. Here we report such a patient recently managed in our institute.

Case Report

An otherwise healthy gentleman, 67-year-old, presented to our outpatient clinic with the change in his voice for 20 days, which came on suddenly and was constant throughout. He also complained of having vocal fatigue and of not being able to speak loudly. However, there

was no dysphagia or dyspnea. He was a chronic tobacco chewer; the rest of his medical and surgical history was unremarkable. A thorough throat, nose and ear examination was unremarkable. On doing a nasopharyngolaryngoscopy we found, to our surprise, a black, mobile, living leech, a centimeter below the glottis; although the full extent was not visualized. (Figure 1)



Figure 1: Nasopharyngolaryngoscopy

When probed, on the hindsight, the man remembered drinking water from a stream in the hills near his villages, a day prior to the start of his symptoms. He even claimed he had seen and thrown a leech away before drinking the next handful of water.

We planned to remove the leech with a flexible bronchoscope. After obtaining a full informed consent and after appropriate 'nil-oral' hours, his larynx was sprayed with 15% lignocaine (with 4% topical lignocaine solution "top-ups" during the procedure). An adult flexible bronchoscope was inserted orally to visualize and negotiate the glottis, which was moving equally with breathing. The 'foreign body' was confirmed to be a leech indeed. Interestingly, it demonstrated several movements, apparently trying to make its way out. With the tip of the scope at the level of the glottis, a blunt biopsy forceps were inserted via the instrument channel, and the wiggly leech was grasped successfully in the second attempt. The leech and the scope were brought out 'en bloc'. It was 6 cm long and 1 cm wide, blackish, slender and segmented leech, alive and fully active. (Figure 2)



Figure 2: Alive leech



Figure 3: Bronchoscopy

His airways were entered again for a fuller examination, and also to rule out the distal residence of other leeches. Both of his bronchial trees were normal up to the subsegmental level. (Figure 3) As usual for after most bronchoscopies, the patient was observed for 2 hours and subsequently discharged home. He remains well, with a normal voice at 6 weeks' follow up.

Discussion

Leeches are segmented worms that are generally found in streams, pools, and springs. Exposure leading to their attachment to one or the other parts of the human body (also called hirudiniasis) is a common occurrence in the wilderness.⁸ The majority of the reports hail from the Mediterranean, Africa, and Asia. Most of the published literature describes hirudiniasis as it occurs externally⁸, but the endoscopic treatment of aspirated leeches has also been published, as early as 1975.⁷ They can enter the airways via the nose or mouth of a person who is either swimming in contaminated streams or drinking infested water from rivers, lakes, and springs directly.³ On a long journey of about an hour in the hills near his village, the 'victim' had drunk water from a spring when the leech made his way into his trachea. It is logical to think that he probably swallowed the gulp of water along with the leech but somehow near the posterior pharynx the latter got hold of the mucosa and spared itself an enteral entry; rather it migrated via glottis to seek recluse in trachea!

Patients have presented variously after leech aspiration: hemoptysis, hoarseness, cough and foreign body sensation, to name a few. Some patients have even been mistakenly treated as asthma, tuberculosis, laryngitis, or malignancies.^{4,6} Anemia due to chronic bleeding because of hirudin, an anticoagulant protein secreted by the worm residing in the nasopharynx, is also reported.^{2,3,9} In our case, though, there was not an iota of bleeding in the airway, as examined post-removal. As they can suck up to 9 times their weight of blood, they can swell enormously and even obstruct the airway.¹

While an airway foreign body is an emergency in itself, alive foreign bodies in the airway pose even more challenges in diagnosis and management. Flexible bronchoscopy is the method of choice for diagnosing most airway foreign bodies, and also a method of choice for removal of some. Lignocaine spray or hypertonic saline directly on the worm has been reported to help detach the worm.⁶ It cannot be said as to whether the leech was resting free or was it 'detached' by the lignocaine that was sprayed onto the vocal cord and subglottic airway in our case. Through-the-scope biopsy forceps or dormia baskets have been used to remove the worms as a whole or piecemeal.⁶ We used a blunt flexible biopsy forceps to grasp the worm and deliver.

Drinking potentially contaminated water directly from springs is a possible risk factor for leech aspiration which can occur without other host-related risk factors. Hoarseness can be the presenting feature, and the presentation can be quite delayed. Endoscopic measures are quite handy in both- diagnosis and treatment.

Conclusion

Alive creatures in the airway are truly rare occurrences. Presentation can be delayed. Endoscopic measures are useful in diagnosis and treatment.

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