

An unusual cause of severe dyspnea: A laryngeal live leech: Case report

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ABSTRACT

INTRODUCTION: Foreign bodies in the upper airways are one of the most challenging otolaryngology emergencies, leeches present a very rare cause of airway foreign bodies around the world.

CASE REPORT: A 6-year-old girl was referred to our otolaryngology department at a tertiary university hospital with a severe dyspnea and hemoptysis. Nasofibroscopy revealed a dark living leech in the supraglottic area which extends to the glottis. The patient was urgently admitted to the operating room, the leech was grasped and removed with a foreign body forceps with a full length of more than 6 cm. All symptoms were relieved post operatively and she was discharged one day later.

CONCLUSION: Leeches should be suspected as an airway foreign body in patients with a recent history of drinking from stream water. Prevention remains the best treatment for such cases based simply on hygiene measures like not drinking stream water directly and filtering drinking water before it is used.

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1. Introduction

Foreign bodies in the upper airways are one of the most challenging otolaryngology emergencies, leeches are a very rare cause of airways foreign bodies around the world. Leeches are segmented worms that are generally found in streams, pools and springs. They can enter the human body when people swim in contaminative streams or drink infested water. We report an unusual case of a 6-year-old girl with a severe dyspnea caused by laryngeal leech infestation.

2. Case

A 6-year-old girl was referred to our otolaryngology department at a tertiary university hospital with a severe dyspnea and hemoptysis. Her parents reported that 2 month after drinking from stream water, the patient developed hemoptysis and dysphonia without odynophagia or dysphagia. Nasofibroscopy revealed a dark living leech in the supraglottic area which extends to the glottis (Fig. 1). The patient was urgently admitted to the operating

room. An orotracheal tube and material for tracheotomy were cautiously prepared. Under general anesthesia, a rigid laryngoscope was placed, taking care not to touch the leech, pushing the epiglottis forward and exposing the entire laryngeal cavity. The laryngoscope was suspended and the vestibule was carefully examined. A living leech was located on the anterior supraglottic area with its sucking head stuck into the anterior commissure just below the vocal cords.

The leech was grasped and removed with a foreign body forceps with a full length estimated to be more than 6 cm (Fig. 2). All symptoms were relieved post operatively and she was discharged a day later.

3. Discussion

Leeches are parasites that live on occasional blood sucking by attaching to fish, amphibians, and mammals [1]. They use anterior suckers consisting of the jaw and teeth to attach to their host's mucous membrane to feed. Leeches can secrete an anticoagulant enzyme named hirudin, which inhibits coagulation of the blood [2,3]. Therefore, signs of bleeding can be seen, such as epistaxis, hematemesis, hemoptysis, or even anemia, depending on the exact site of the infestation [3].

Leeches can ingest blood up to approximately 9 times their own body weight [4]. Signs of airways obstruction such as nasal obstruction, dyspnea or suffocation can therefore progress over time [4].

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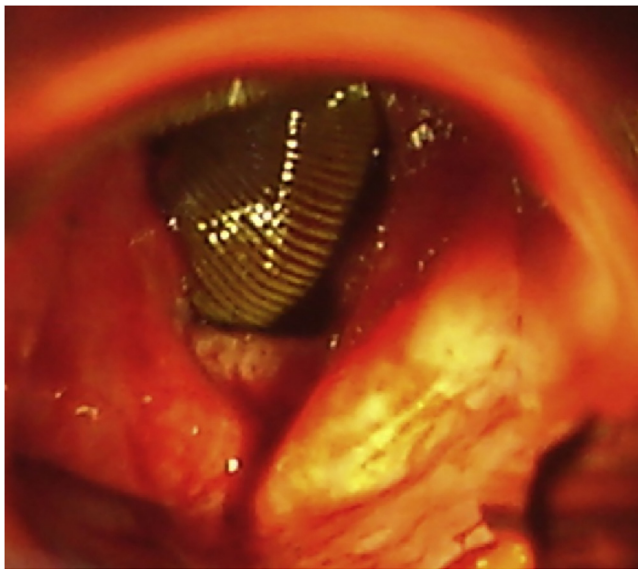


Fig. 1. Nasofiberscopy showing a leech.



Fig. 2. Leech extraction.

Besides, a foreign body sensation, dysphagia or hoarseness may also be found [3,4].

There are only a few reports of living leeches stuck in the larynx [5]. Leeches can attach to the mucosa of the entire upper aerodigestive tract but a leech stuck in the larynx is rarely seen [6].

The presence of a living leech in the respiratory tract should be suspected in patients who complain of hemoptysis, hoarseness, and respiratory distress of unknown origin with a recent history of contact with untreated water. The symptoms may be misdiagnosed as laryngitis, asthma, infections such as tuberculosis or even malignancies [7].

Direct laryngoscopy under general anesthesia is the best approach for removal of a leech from the aerodigestive tract. As a leech attaches strongly with its sucking head, removal should be done carefully [7]. How the leech is grasped is

also important because it is slippery and could rupture easily, thus, using forceps with blunt jaws is recommended. Great care should also be taken to entirely remove all parts of the body. Rupture of the leech with parts of the head remaining could result in continued bleeding because the suckers contain hirudin, which is an anticoagulant enzyme. Some experts advise using lidocaine in tough cases as it causes relaxation of the head suckers.

4. Conclusion

Leeches should be suspected as an airway foreign body in patients with a recent history of drinking stream water, it should be diagnosed and treated promptly to avoid disastrous outcomes. Nasofiberscopy makes a definite diagnosis to detect a leech in the larynx. Direct laryngoscopy is the procedure of choice to extract it. Prevention remains the best treatment for such cases based simply on hygiene measures like not drinking stream water directly and filtering drinking water before it is used.

Conflict of interest

The authors declare having no conflicts of interest for this article.

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Written informed consent for publication of their clinical details and/or clinical images was obtained from the parent of the patient.

Consent

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Author contribution

None.

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