

# Bloody Wiggler, a Case Report of a Leech in the Pharynx

Arafat Kasuka<sup>1</sup>, Fred Bisso<sup>1</sup>, Fiona Kabagenyi<sup>2</sup>

<sup>1</sup>Department of Ear Nose and Throat, Mbale Regional Referral Hospital, Mbale, Uganda; <sup>2</sup>Department of Ear Nose and Throat, Makerere University, Kampala, Uganda

Correspondence: Fiona Kabagenyi, Department of Ear Nose and Throat, Makerere University, P.O. Box 7072, Kampala, Uganda, Tel +256 774150102, Email kabagenyiatwooki6@gmail.com

**Abstract:** Leeches are an unusual cause of epistaxis and haemoptysis that should be considered in places with poor access to water. In this case report, we present a 7-year-old girl previously mismanaged as bacterial pharyngitis but later discovered to be a leech in the pharynx. She had ingested a leech from a spring that caused a foreign body sensation in the throat, frequent throat clearing, epistaxis, haemoptysis, and mild anaemia. The 3cm long leech was successfully removed by using Tilley forceps without any anaesthesia and with complete resolution of symptoms.

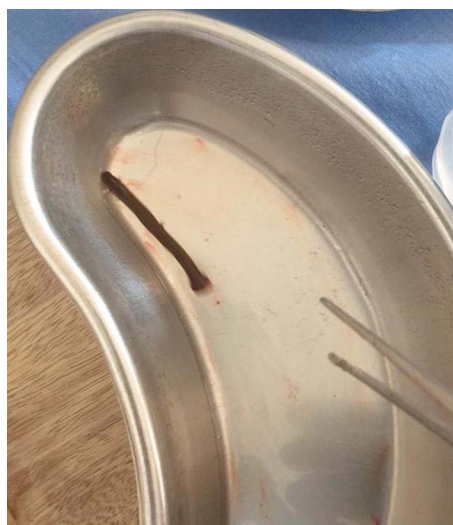
**Keywords:** foreign body, oropharynx, nasopharynx, hemoptysis, epistaxis

## Introduction

Leeches are living organisms found in both terrestrial and aquatic environments.<sup>1,2</sup> They rarely infest the human body in a condition known as hirudiniasis.<sup>2</sup> The commonest risk factors for getting hirudiniasis are visiting or living in rural areas, wild environments, or contact with polluted water from streams, pools or springs, whether through drinking it or swimming in it.<sup>1,3</sup> Once the leech attaches to the skin or mucosal surface using its anterior sucker, it uses its saliva to anaesthetize the site of its attachment.<sup>1,4</sup> Therefore, its host does not feel pain. Its saliva also contains vasodilators and hirudin that make its feeding of the host's blood more effective. The leech can feed up to 890% of its weight.<sup>5</sup> This may sometimes cause complications like anemia and death to its host through recurrent bleeding at the site, from the anticoagulative effects of the hirudin, and through loss to the parasite.<sup>4,6–10</sup> Wound infection with *Aeromonas hydrophila* bacteria that are resident within the leeches has also been reported.<sup>1,4</sup> Leeches in otolaryngology practice have been reported commonly in the nose<sup>2,3,6,11–14</sup> followed by the pharynx<sup>7,10</sup> (nasopharynx,<sup>3,9</sup> oropharynx<sup>6,15–17</sup> then hypopharynx<sup>7,18</sup>) and rarely in the larynx<sup>3,5,6,19,20</sup> and trachea.<sup>21,22</sup> They lead to epistaxis,<sup>3</sup> hemoptysis,<sup>6,15–17</sup> foreign body sensations,<sup>3</sup> voice hoarseness<sup>20</sup> and sometimes cause airway obstruction<sup>21</sup> depending on the site. In this case, we report a leech at the junction of the nasopharynx and oropharynx that caused epistaxis and hemoptysis, a few days after ingestion of polluted water.

## Case Report

A 7-year-old girl was referred from a peripheral district hospital to our Ear Nose and Throat (ENT) Department with a three days' history of intermittent bleeding from the nose. This started suddenly, in the absence of any trauma, ongoing upper respiratory tract infection and other nasal symptoms. She bled from both nostrils and spat blood-stained saliva but had no bleeding from other sites. She reportedly had been having a feeling of a wiggling object in the throat for a week prior referral, which was treated as pharyngitis with antibiotics but without any improvement. She constantly cleared her throat with frequent spitting and had disturbed sleep at night due to the foreign body sensation. This sensation allegedly started after drinking some of the water she collected from the local spring. She otherwise had no pain or difficulty



**Figure 1** Showing the retrieved leech in the kidney dish.

swallowing and no difficulty in breathing, cough, wheezing, voice hoarseness or stridor were noted. She was not on any chronic medication and had unremarkable medical and surgical history.

Clinical examination revealed a well-nourished child in good general condition that constantly cleared her throat. Notably, she had mild to moderate pallor but with normal vital signs. The anterior rhinoscopy exam had normal findings save for the dried blood clots visualized in the nasal cavities with no active bleeding. Oropharyngeal exam showed a wiggling cylindrical worm-like object at the junction between the nasopharynx and oropharynx, adjacent to the soft palate. The wiggling foreign body moved more when probed and was attached to the posterior pharyngeal wall mucosa. Notably, a localized hematoma was seen on the right side of the oropharynx. An impression of a living organism was made.

The child was very cooperative and was managed as an outpatient using a headlight, tongue depressor, Tilley forceps and suction. The visualized foreign body was grabbed by the Tilley forceps for about 20 seconds and extracted in its entirety within a minute. This was found to be a 3cm long leech as in [Figure 1](#). The oropharyngeal hematoma was subsequently suctioned. She was allowed home on oral ciprofloxacin for five days, iron supplements for one month, and cautioned not to take water from the spring. Follow-up at 2 weeks showed complete resolution of symptoms.

The child's parent provided informed consent for the case details and any accompanying images to be published, available upon request. Institutional approval was not required to publish the case details.

## Discussion

According to our knowledge, this is the first documented report of a leech with an ENT manifestation in Uganda. Similar cases are reported in Ethiopia,<sup>7,17,21</sup> Tanzania<sup>8</sup> and Kenya<sup>10</sup> within the East African region, in arid areas of Middle East,<sup>6,16,18</sup> and in rural areas of westernized countries especially Turkey<sup>3,15</sup> and China.<sup>14,22</sup> Although several authors generally recognize that living in rural areas with poor access to water is a risk factor to getting hirudiniasis, a case of a child accidentally ingesting a medical leech in an urban area in Turkey is reported.<sup>15</sup> Our patient came from a rural setting where water was collected from an open spring and she reportedly drank directly from it.

Due to its rarity, it is not uncommon to misdiagnose and mismanage patients. Our patient was misdiagnosed as bacterial pharyngitis. Others report mismanaging leeches as asthma.<sup>19,22</sup> Whereas we are cognizant of the poor access to specialized ENT care experienced by communities especially in rural areas, proper history taking, and adequate examination remain the cornerstones of appropriate diagnosis and eventual management. Our patient presented with unexplained recurrent intermittent bleeding from the nose or throat, foreign body sensation and with a recent history of drinking or swimming in unsafe water. This clinical presentation is similar to cases reported especially in the at-risk

groups like children,<sup>3,6–9</sup> elderly,<sup>13,14,20</sup> and mentally challenged persons.<sup>12</sup> Of the 19 cases reported in his series, Harun<sup>3</sup> found 15 children, with 10 being under 10 years of age, a range in which our patient lies. The youngest reported case of leech infestation is of a 9-month-old child.<sup>9</sup> A case of a mentally challenged 19-year-old is also reported.<sup>19</sup> Our patient was a 7-year-old child qualifying to be among the at-risk groups for leech infestation.

Management of leech infestations includes primary prevention with improved access to safe water and sanitation.<sup>1</sup> Improved access to specialized health care where timely diagnosis and management can be instituted is also key. Leech retrieval can be done with or without anaesthesia, depending on the site of infestation and the age of the patient.<sup>1,3–20</sup> Generally, leeches in the larynx and trachea need general anaesthesia<sup>12–14</sup> whereas those in the nose and oropharynx may require no anaesthesia like in our case.<sup>6,17,19</sup> Several techniques including direct pressure in the middle of the wiggling leech for about 20 seconds with a Tilley's forceps until the leech spontaneously releases itself,<sup>1,12</sup> local anaesthesia with lignocaine,<sup>3,6</sup> or general anaesthesia with sevoflurane,<sup>1,3,13</sup> hypertonic saline,<sup>1</sup> electrocautery,<sup>15</sup> negative pressure suction<sup>14</sup> have been employed effectively. No post procedural complications were mentioned.<sup>3,6,14</sup> We successfully used manual extraction using a Tilley forceps in our case with complete resolution of symptoms at 2 weeks.

Some authors report complications of anemia following leech bites bad enough to require iron supplementation<sup>6</sup> and blood transfusion.<sup>7,10,17</sup> All six cases from Jordan had iron deficiency anemia.<sup>6</sup> A child died due to anemia-related complications in Kenya.<sup>10</sup> Getahun et al<sup>17</sup> reported severe anemia of 3mg/dl. Our patient clinically had mild anemia for which iron supplements were given. We were limited by unavailability of laboratory services at the time of management in our setting. Patient reviews were also limited by the long distance from our health facility and her family's lack of transport to return in time.

## Conclusion

Health-care providers should consider leeches as a rare cause of ENT symptoms especially in at-risk patients from rural areas that can be safely and effectively removed. Access to safe water and sanitation should be improved in our rural communities as a preventive measure.

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We acknowledge the parental consent to sharing this rare case with the scientific community.

## Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agreed to be accountable for all aspects of the work.

## Disclosure

The authors report no conflicts of interest in relation to this work.

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