

# An Unusual Cause of Adult Dyspnea and Hemoptysis: Leech Infestation of the Larynx

## Yetişkinlerde Dispne ve Hemoptizinin Nadir Bir Nedeni: Larinkste Sülük

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### ABSTRACT

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One of the major causes of acute respiratory distress is a foreign body in the respiratory tract. Rarely the foreign body may be a living object like a leech. The presence of a leech in the larynx gives rise to airway obstruction, change in the voice and spitting of blood. Leech infestations must be kept in mind in the differential diagnosis of unusual respiratory distress, especially in the countries where people use habitual drinking water from springs. This is quite common in rural areas, and leeches gain access into the body usually by this way. Direct laryngoscopy is essential both for diagnosis and removal of the leech in the larynx and removal of a leech requires special care and gentleness because it attaches strongly with its suckers. Here we report an unusual presentation of leech infestation of human body.

#### Keywords

*Leeches, larynx, foreign bodies, airway obstruction, dyspnea, hemoptysis*

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### ÖZET

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Akut solunum sıkıntısının en önemli nedenlerinden biri, solunum yollarında yabancı cisim varlığıdır. Nadiren bu yabancı cisim, sülük gibi canlı bir varlık olabilir. Larinkste sülük varlığı hava yolu tıkanıklığına, ses değişikliğine ve kan tükürmeye sebep olur. Akut solunum sıkıntısının ayırıcı tanısında sülük yutulması, insanların özellikle kırsal alanlarda sık bulunan geleneksel su kaynaklarını, içme amacıyla kullandıkları ülkelerde akla gelmelidir. Kırsal alanlarda bu tür olaylar daha sıklıkla ve sülükler vücuda genellikle bu yoldan girerler. Tanıda ve sülüğün larinksten çıkarılmasında direk laringoskopi gereklidir, ve bu arada sülük vantuzlarıyla bulunduğu yere çok sıkı yapıştığından, uzaklaştırılması da özel dikkat ve itina gerektirir. Biz bu yazıda sülüğün insanda bulunduğu nadir bir yerleşimi bildiriyoruz.

#### Anahtar Sözcükler

*Sülük, larinks, yabancı cisim, hava yolu obstruksiyonu, dispne, hemoptizi*

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## INTRODUCTION

Leeches are blood sucking water worms that vary in color and length. They are cylindrical or leaf like in shape, depending on the contraction of their bodies. Habitual drinking of water from springs which is not rare in the rural areas of Turkey, may give rise to leech infestation. Leeches can be localized at different parts of respiratory and digestive system. They attach strongly to mucous membranes with their suckers and secrete a substance called hirudin which inhibits the coagulation of the blood. The diagnosis may be confusing due to different clinical presentations. Here we report an unusual presentation of leech infestation in human body.

## CASE REPORT

A 65 year old male patient admitted to the emergency room with a 10-day history of respiratory distress, hoarseness, and spitting blood. It was learned that similar complaints had occurred 6 months ago, and a living leech was extracted from his oral cavity. Based on the history and presentation, a leech in the larynx was suspected. Indirect laryngoscopy confirmed our initial diagnosis; a moving object was seen between the vocal cords. Urgent direct laryngoscopy was performed under local anesthesia. A living leech was found just beneath the anterior commissure, protruding from rima glottis (Figure 1). It was removed with forceps. The leech was 5 cm in length and dark green in color (Figure 2). The patient had no post-operative complications and was discharged on the next day.

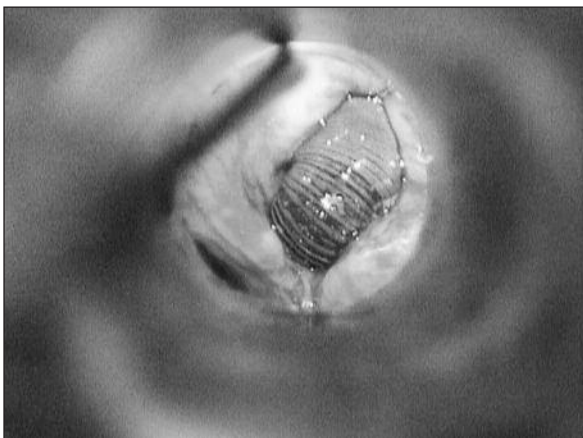


Figure 1. Leech in the larynx, revealed by laryngoscopy.



Figure 2. Photograph of the leech after removal. It was 5 cm long and dark greenish in colour.

## DISCUSSION

Leech infestation of human still exists in undeveloped and developing countries. They gain access into the body usually due to habitual drinking of water from springs which is quite common in rural areas. They usually attach to the mucosal surface of the nose, nasopharynx, oropharynx, and the larynx.<sup>1-4</sup>

Symptoms of the leech infestations depend on their localizations. When the leech is present in the nasal cavity or nasopharynx, patient presents with epistaxis, nasal obstruction, and a sensation of a moving foreign body in the nose. When it is in the oral cavity patient presents with spitting of blood and a feeling of foreign body. The presence of a leech in the larynx give rise to airway obstruction, change in the voice and spitting of blood.<sup>2-4</sup>

Diagnosis is usually easy when the leech is present in the nose or oral cavity. However, the diagnosis becomes difficult when it is hidden in the nasopharynx. Severe anemia can be the only presenting symptom and lots of unnecessary laboratory tests may be performed to find out the etiology of anemia before the exact diagnosis.<sup>1,5</sup> The examination of the nasopharynx under general anesthesia may be required especially in the children to investigate the other causes of nose bleeding. When the leech is seen through the oropharynx, it can be easily grasped and removed with forceps. However a great attention is necessary to avoid inhalation during removal.

One of the major causes of acute respiratory distress is a foreign body in the respiratory tract. This con-

dition is an emergency and requires immediate attention, as airway obstructions generally result in severe hypoxia and death. Rarely the foreign body may be a living object like a leech.<sup>2-4</sup> When the leech is present in the larynx, the diagnosis is difficult and these cases may be misdiagnosed. Before referring the patient to an ENT department many unnecessary and complicated tests and investigations can be performed by the other disciplines to evaluate the etiology.<sup>3</sup> We were lucky with the presented patient as he had a history of leech infestation at his oral mucosa 6 months ago which made the diagnosis easy for us.

Direct laryngoscopy is essential both for diagnosis and removal of the leech in the larynx. It can be perfor-

med either with general or local anesthesia. However, local anesthesia is a more appropriate approach in adults, since the leech can easily transport to lower airways during the laryngeal intubations. Removal of a leech requires special care and gentleness because it attaches strongly with its suckers. A strong grip and force are required to remove it from its attachment surface. Care must be taken to keep the leech from being swallowed or aspirated.

In conclusion, leech infestation must be kept in mind in the differential diagnosis of unusual respiratory distress, nose bleeding, and blood spitting especially on those who are living in rural areas where drinking water from springs is a habit.

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#### REFERENCES

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1. Demiroren K, Caliskan U. Unexpected result in the etiological approaching to an anemic case: a leech infestation. *Pediatr Hematol Oncol* 2003; 20:547-50.
2. Pandey CK, Sharma R, Baronia A, et al. An unusual cause of respiratory distress: live leech in the larynx. *Anesth Analg* 2000;90:1227-28.
3. Kaygusuz I, Yalçın S, Keleş E. Leeches in the larynx. *Eur Arch Otorhinolaryngol* 2001;258:455-57.
4. Labadi MH, Jamal MN. Leeches in the larynx. *J Laryngol Otol* 1997;11:980-81.
5. Krüger C, Malleyeck I, Olsen HE. Aquatic leech infestation: a rare cause of severe anemia in an adolescent Tanzanian girl. *Eur J Pediatr* 2004;163:297-99.