An unusual cause of epistaxis, anemia and upper respiratory tract obstruction,
Leeches: Report of three cases

Burun kanaması, anemi ve üst solunum yolunda obstrüksiyon yapan nadir bir etken,
Sülükler: Üç olgu sunumu

Engin Şengül1, Salih Bakır2, Cemile Arıkan Şengül3, Ömer Erdur1

ABSTRACT

The leech is an endoparasite for man and may cause lethal complications. In this article, we report two cases of 4 and 6-year-old who presented epistaxis due to leech infestation in nasopharynx and other case of 65-year-old adult with alzheimer who presented obstruction of upper respiratory tracts and anemia due to leech infestation in larynx. Especially in rural areas, it should always be borne in mind that leech might cause high mortality and morbidity due to serious complications such as anemia and obstruction of upper respiratory tracts and should be considered in evaluating the differential diagnosis of upper airway obstruction. J Clin Exp Invest 2012; 3 (3): 401-403

Key words: Leech, epistaxis, anemia, obstruction of upper respiratory tract.

Case 1

A 4-year-old male patient from Siirt, southeastern Turkey, presented with a two-week history of intermittent epistaxis. He was admitted to our otolaryngology department. Fiberoptic endoscopic examination was performed and active bleeding area was found in the adenoid tissue of nasopharynx and dark black coloured leech has seen on inferior of this localization. According to the patient's history, he had drunk dirty water from a contaminated pool two weeks previously. Rigid endoscopic examination was performed under general anesthesia. The leech was moved from inferior nasopharynx to superior. It removed out with forceps. The leech which measured about 2.5 cm in length and 3 mm in diameter. Bleeding ceased immediately after removal of the leech.

1 Siirt Devlet Hastanesi, Kulak Burun Boğazı Kliniği, Siirt, Türkiye
2 Dicle Üniversitesi Tip Fakültesi, Kulak Burun Boğazı Kliniği, Diyarbakır, Türkiye
3 Kurtalan Devlet Hastanesi, İç Hastalıkları Kliniği, Siirt, Türkiye

Correspondence: Engin Şengül, Siirt State Hospital, Department of Otolaryngology, Siirt, Turkey Eposta: drenginsengul@gmail.com

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Case 2
A 65-year-old male patient with alzheimer from Kuratalan, Siirt, southeastern Turkey, presented with one-week history of weakness, hemorrhaging from the mouth and mild dyspnea. He was admitted to internal medicine department. On admission, he was pale, his pulse rate was 88/min, blood pressure was 100/70 mmHg and respiratory rate was 26/min. The results of blood count were as follows: erythrocyte count 3.2 million per mm$^3$ (reference range [r.r.]: 4.2-5.9 million per cu mm$^3$); hematocrit 29% (r.r.: 39-49%); hemoglobin 10 g/100 ml (r.r.: 13-18 g/100 ml); mean corpuscular volume 74 μm$^3$ (r.r.: 80-100 μm$^3$); mean corpusular hemoglobin 22 pg (r.r.=27-32 pg); and mean corpusular hemoglobin concentration 26% (r.r.: 32-36%). The complete blood count revealed a hypochromic microcytic anemia. The platelet count was 250 K/μL. Total white blood cell count was 6300/μL with 16% eosinophils. The international normalized ratio (INR) and partial thromboplastin time (PTT) were both normal. As no pathology, lymphadenopathy or hepatosplenomegaly was found on examination.

The patient was then referred to another hospital with chest department. He was admitted the chest diseases department due to hemoptysis. His clinical and radiologic examination of the lung revealed no pathological finding. The physical examination did not reveal any abnormalities, in particular no obvious bleeding sites. As no pathology was found on physical examination, the patient was then referred to the otorhinolaryngology department. Indirect laryngoscopic examination was performed and a dark green-black living foreign body was found adherent on the laryngeal face of epyglottic region. It removed out with bayonet. The worm with a blood-suicer was identified as a leech, which measured about 10 cm in length and 1 cm in diameter. It was still alive. The patient’s breathing has improved and bleeding has stopped. The patient was discharged 1 day after.

Case 3
An 8-year-old male patient from Siirt, southeastern Turkey, presented with a three-day history of intermittent epistaxis. According to the patient’s history, he had drunk water from the lake six days previously and complained that something was moving in his nose. Indirect laryngoscopic examination was performed and active bleeding area was found in the adenoid tissue of nasopharynx and dark black colored leech has seen on this localization. It removed out with forceps. The leech which measured about 2 cm in length and 3 mm in diameter. Bleeding ceased immediately after removal of the leech and the patient was discharged the same day.

DISCUSSION
The leech is a blood-sucking worm, belonging to the phylum Annelida, class Hirudinea. Leeches that attack man may be divided into two classes (aquatic and land). Land leeches have powerful jaws that can penetrate the skin so that they can attach anywhere on the external surface of the body. Land leeches are common in Southeast Asia, the Pacific Islands and South America. Aquatic leeches have weak jaws and require soft tissues, such as the mucosa of the upper aerodigestive tractus, to feed on; they have a worldwide distribution. Aquatic leeches are acquired while bathing or drinking unfiltered water or swimming in contaminated pools. Due to this mode of transmission, almost all cases have been reported from lessdeveloped countries where use of safe water is often a problem, especially in rural areas. Aquatic leeches live exclusively in fresh water. They have been described in sites like the esophagus, mouth/pharynx/larynx, conjunctiva, nose, trachea/bronchi, vagina, bladder, and rectum. When attached to the mucous membrane, they ingest blood averaging 890% of their weight. In this regard, aquatic leeches are more dangerous than land leeches because they are more likely to cause severe anemia, which may require blood transfusion. Cundall et al. reported three patients with severe anemia, one of whom died. One of our patients had suffered from weakness and hemorrhaging from the mouth for approximately seven days, and a hypochromic microcytic anemia had developed, but he did not require blood transfusion. The most common mode of presentation in leech endoparasitism is nasal infestation. Bilgen et al. reported a case with nasal obstruction and intermittent epistaxis. Golz et al. reported 17 cases of leech infestation in nasopharynx presented epistaxis. Our two cases were nasal leech infestation.

A leech is rare foreign body in the upper respiratory tract. Tufek et al. reported two cases in which a live leech was in their larynx. They had removed the leechs through the direct laryngoscopy under general anesthesia. We performed indirekt laryngoscopic examination and removed the leech in the larynx with bayonet.

Leech infestation should be kept in mind when faced with intermittent or severe epistaxis, hemoptysis and dyspnea in patients who recount a recent history of swimming in possibly contaminated waters or drink it. It could be caused anemia. To pre-
vent the leech infestation, in areas in which leeches are present only boiled or filtered water should be drunk.

REFERENCES