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CASE REPORT

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

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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 infestasyon in nasopharynx and other case of 65-year-old adult with alzheimer who presented obstruction of upper respiratory tracks 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.

ÖZET

Sülük insanlar için bir endoparazittir ve ölümcül komplikasyonlara sebep olabilir. Bu makalede, nasofarinkste sülük nedeniyle rekürren epistaksisi olan 4 ve 6 yaşlarındaki iki olgu ile larinkste sülüğe bağlı üst solunum yolu obstruksiyonu, hemoptizi ve anemisi olan 65 yaşında alzheimer'lı bir olguyu irdeledik. Özellikle kırsal kesimlerde sülüğün, anemi ve üst solunum yolu obstruksiyonu gibi ciddi komplikasyonlardan dolayı yüksek mortalite ve morbiditeye neden olabileceği akılda tutulmalı, üst solunum yolu obstruksiyonlarını değerlendirirken de ayırıcı tanıda düşünülmelidir.

Anahtar kelimeler: Sülük, epistaksis, anemi, üst solunum yolu obstruksiyonu.

INTRODUCTION

Leeches are blood-sucking hermaphroditic parasites that vary in color and range in length from a few millimeters to half a meter; they are cylindrical or leaf like in shape, depending on the contraction of their bodies.[1] Leech infestation primarily occurs in tropical areas, such as in Mediterranean countries, Africa and Asia. They have a mouth, tentacles, three jaws, and suckers specially adapted for attaching to and sucking blood from the skin and mucosal surface of mammalian species. However, as an endoparasite, the leech can cause serious, even lethal, complications, though it is rare. Leeches are usually taken into the human body while bathing or drinking unfiltered water or while swimming in contaminated water. They localize on the mucosa of the oropharynx, nasopharynx, tonsils, esophagus, nose, and larynx and rarely in the rectal mucosa.[2-5]

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 otorhinolaryngology department. Fiberoptic endoscopik 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.

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Case 2

A 65-year-old male patient with alzheimer from Kurtalan, 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 corpuscular hemoglobin 22 pg (r.r.=27-32 pg); and mean corpuscular 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 physical examination.

The patient was then referred to another hospital has 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-sucker 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.[6] 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.[7] Aquatic types 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.[8] Aquatic leeches live exclusively in fresh water. They have been described in sites like the esophagus,[7] mouth/pharynx/larynx,[8] conjunctiva,[9] nose,[10] trachea/bronchi,[11] vagina,[12] bladder,[13] and rectum.[5] When attached to the mucous membrane, they ingest blood averaging 890% of their weight.[14] 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.[1] Cundall et al.[15] 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.[10] Bilgen et al.[2] reported a case with nasal obstruction and intermittent epistaxis. Golz et al.[16] 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.[4] 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.

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