



Leech Infestation of the Nasopharynx; A Rare Cause of Epistaxis and Hemorrhage

Mehmet Fatih Garça¹, M. Kürşat Yelken², Mehmet Hanifi Okur³, Sevil Ari Yuca⁴

¹Van İpekyolu Public Hospital, Department of Otolaryngology, Van

²Gaziosmanpaşa University, Medical Faculty, Department of Otolaryngology, Tokat

³Van Education and Research Hospital, Department of Pediatric Surgery, Van

⁴Van Women Maternity and Children's Hospital, Department of Pediatric Diseases, Van, Turkey

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Correspondence: Dr Mehmet Fatih Garça;
İpekyolu Devlet Hastanesi KBB Servisi, Van/
Turkey

Phone: +904322179398, Fax: 904322176370

E-mail: fatihgarca@hotmail.com

ABSTRACT

In this case report we present a live leech in the nasopharynx of a 14 years old male that caused symptoms of oral hemorrhage and epistaxis. Habitual drinking of water from spring appeared to cause leech infestation. The leech was removed endoscopically after 4% pantocain and oxmetazolin application. Leech infestation must be kept in mind in the differential diagnosis of unusual respiratory distress, epistaxis, oral hemorrhage and hemoptysis especially on those who are living in rural areas where drinking water from springs is a habit.

Key words: Leech, epistaxis, endoscopy

Nazofarinkste Sülük İnfestasyonu: Epistaksis ve Hemorajinin Nadir Bir Sebebi

Bu olgu sunumunda 14 yaşında bir erkek hastada ağızdan ve burundan kanama semptomlarına neden olan nazofarinkste canlı sülük sündük. Doğadaki su kaynağından suyun doğal olarak içilmesinin sülük infestasyonuna sebep olduğu ortaya çıktı. Sülük % 4 lük pantokain ve oximetazolin uygulamasından sonra endoskopik olarak çıkarıldı. Sülük infestasyonu doğadaki su kaynaklarından su içilen kırsal bölgelerde yaşayanlarda nadir solunumsal sıkıntı, epistaksis, ağızdan kan gelmesi ve hemoptizinin ayırıcı tanısında akılda tutulmalıdır.

Anahtar kelimeler: Sülük, epistaksis, nazofarinks, endoskopi

INTRODUCTION

Leeches are invertebrates of the phylum Annelida and class Hirudinea. There are approximately 650 species, but not all pose a problem to humans (1). Leeches vary in shape, in color and in length (2). They may be divided into two classes: land leeches and aquatic leeches. Aquatic leeches are good swimmers and have a worldwide distribution (3). In human, ectoparasitism by this parasite is frequent in rural areas. Habitual drinking of water from springs, which is not rare in the rural areas of Turkey, may give rise to leech infestation (4). Leeches in water are taken into the body when water is drunk, and they localize on the mucosa of pharynx, tonsils, esophagus, nose or nasopharynx (4,5). They usually occur as foreign bodies in the upper respiratory and digestive tract (2). When leeches feed, they secrete an anticoagulant (hirudin), which helps them obtain a full meal of blood (2,4). The most significant symptoms are hemoptysis and/or epistaxis. Serious complications such as dyspnea and hematemesis may also be expected (2,6,7). In this case report we present a live leech infestation in the nasopharynx that caused symptoms of oral hemorrhage and epistaxis and treated via endoscopic removal.

CASE

A 14-year old Turkish male presented with a 3-week history of oral blood spitting and hemorrhage. Previously he was examined in a local hospital, where a routine blood test, a chest X-ray, and a physical examination revealed no cause for this pathologic condition. He had no history of trauma, foreign body ingestion, fever, echymotic spots, dysphagia or drug intake. He had microcytic hypochromia with a hemoglobin level of 10.2mg/dl (reference range, 12-16 mg/dl), and a hematocrit of 29.6%, however, his nutritional status was adequate, there was no other cause of anemia, and no evidence of any hemorrhagic or thrombotic disorder. On oral examination a green-brown mobile tissue compatible with a large live formation in the nasopharynx behind the uvula was detected (Fig. 1). Endoscopic examination with a 2.7-mm rigid telescope was performed following nasal packing with 4% pantocain and oxmetazolin to achieve nasal decongestion and local anaesthesia. A live formation was noticed in the nasopharynx. This formation was removed under local anesthesia and identified as a leech. The leech was green-brown in colour with a larger posterior and a smaller anterior sucker. It mea-

sured about 7 cm long and 0.5 cm wide at rest and was mobile with an "inch-worm" like crawling motion (Fig 2). After removal of the leech, bleeding stopped immediately. Upon enquiring, the patient reported that he was unsafe water drinking habit i.e. he drank water directly from spring without seeing its content substituting cupped palm of hand for a drinking cup. He started feeling irritation in the throat with foreign body sensation in the throat along with blood stained salivary secretion. Patient became asymptomatic and was discharged from the hospital.

DISCUSSION

For over 2000 years, leeches were needlessly applied for many ailments as an adjunct to bloodletting. Their use in Europe peaked between 1830 and 1850, but subsequent shortages led to a decline in their use (5,8). Leech infestation of human still exists in undeveloped-developing countries and commonly occurs in low socioeconomic class (6,4,9). Leeches gain access into the body usually due to habitual drinking of water from springs which is quite common in rural areas (2,4,9). Because of their weaker jaws, they normally enter the orifices and feed on mucosal surfaces of the upper aerodigestive tract (nasopharynx, larynx, oesophagus, trachea, or even bronchi), lower genitourinary tract (urethra and vagina), and, rarely, the eyes (2,9). The endoparasitism may be prolonged, because of the inconspicuous site of involvement and the absence of pain. This is related to the release of leech saliva that has local anaesthetic properties (9).

Depending on the site of attachment, symptoms may vary, but usually signs of blood loss can be seen, such as epistaxis, hemoptysis, melena, and severe anemia (4,10). When a leech is located in the nasal cavity or nasopharynx, patients present with epistaxis, nasal obstruction, and/or the sensation of a foreign body moving around in the nose (3). As leeches can ingest an amount of blood equivalent to 890% of their body weight, they may cause severe anemia and a blood transfusion may be required (2,4,10). Bleeding may persist over a longer period of time because there are anticoagulants in the saliva of the leech such as hirudin, which inhibits thrombin and factor IXa, and hementerin, a plasminogen activator (8,9) Anemia and respiratory obstruction, in severe cases, may cause danger to health and life, especially in children, even possibly causing fatalities



Figure 1. On oral examination a green-brown mobile tissue compatible with a large live formation in the nasopharynx behind the uvula was detected



Figure 2. The leech was green-brown in colour with a larger posterior and a smaller anterior sucker.

(2,7,9,10). 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 (6). 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. Nasopharynx examination of the patient under general anesthesia may be required, especially in small children (3). It may be difficult to hold a leech with force or grasp it with forceps because of its soft and slippery body surface, which ruptures easily (2,3,9,10). Therefore, removal of a leech from skin can be facilitated by applying salt, alcohol or vinegar to it. If necessary, a burning cigarette may be held near the parasite. Rapid removal should be avoided because this may cause the jaws to remain behind (1). Leeches can be loosened by local application of cocaine or lidocaine (10). Once the leech has been endoscopically visualised, as in this case, it can be paralysed using cocaine or other local anaesthetic including xylocaine, pantocain or lidocaine and readily removed (7). Removal of leeches from the nasopharynx can be performed via topical/local anesthesia or by direct laryngoscopy under general anesthesia (3).

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

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