

Severe Anemia Due to the Pharyngeal Leech *Limnatis nilotica* in a Child

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SUMMARY: Leech infestation can cause many different clinical symptoms such as epistaxis, haemoptysis, haematemesis, and vaginal bleeding. Therefore leech infestation should be considered as a cause of unexplained severe anemia in rural areas where aquatic leeches are common. In this paper we report a case of pharyngeal leech infestation (*Limnatis nilotica*) presenting with haemoptysis, and epistaxis which resulted in difficulty in making a diagnosis.

Key Words: Leech, anaemia, hemoptysis, epistaxis

Faringeal Sülük: *Limnatis nilotica* Enfestasyonuna Bağlı Ağır Anemi Tablosu Gelişen Bir Olgu

ÖZET: Sülük enfestasyonları epistaksis, hemoptizi, hematemez, vajinal kanama gibi değişik klinik semptomlara sebep olabilir. Bu nedenle kırsal kesimden gelen hastalarda açıklanamayan anemi tablolarında sülük enfestasyonu akla getirilmelidir. Bu yazıda hemoptizi ve epistaksis ile gelen ve tanı koymada güçlük yaratan bir faringeal sülük enfestasyonu olgusu sunulmaktadır.

Anahtar Sözcükler: Sülük, anemi, hemoptizi, epistaksis

INTRODUCTION

Childhood anaemia can be classified as: (a). decreased production of red blood cells or haemoglobin and (b). increased destruction or loss of red blood cells. Anemias due to acute blood loss are caused by, as in adult patients, trauma, haemorrhagic and thrombotic diseases and bleeding from esophageal varices (10).

Although leech infestation is not common, the patients affected may become severely anaemic because of the excessive blood loss (3, 10). In this paper, a pediatric case of pharyngeal leech infestation manifested by haemoptysis and epistaxis that leads trouble in diagnosis.

CASE

A 5 year old girl, from urban area of Aegean region, presented to Dr. Behçet Uz Children's Hospital has complained of vomiting fresh blood, epistaxis and pallor since last three days.

There was no history of trauma or any other related serious illness.

On admission the patient was pale with marked tachycardia (160 beats/min.), febrile (37.6°C), no hepatosplenomegaly, no lymphadenopathy and no evidence of bruising or petechial haemorrhages. An initial throat examination was reported normal. Initial laboratory examination included haemoglobin 3.8 g/dl with a peripheral film showing microcytic hypochromia. The patient was not found to have other causes of anemia, her nutritional state was adequate, no evidence of hookworm was found on microscopy of faeces and no evidence of any haemorrhagic and thrombotic disorder.

Urgent blood transfusion was required in the patient. While maintaining the transfusion the patient vomited foamy fresh blood. The doctor who was trying to aspirate the blood in the patient's mouth noticed the bloody formation moving slightly. This formation was removed by an otolaryngologist under local anesthesia and was brought to the parasitology laboratory and identified as a leech.

In order to rule out of the other probable reasons of gastrointestinal bleeding and researching for another leech infestation an endoscopic examination was made. The endoscopic examination of duodenum has showed atrophic and brilliant areas as if telangiectatic appearance. A biopsy was taken and reported as chronic duodenitis. Bleeding ceased soon after the leech was removed and the patient's condition improved day by day.

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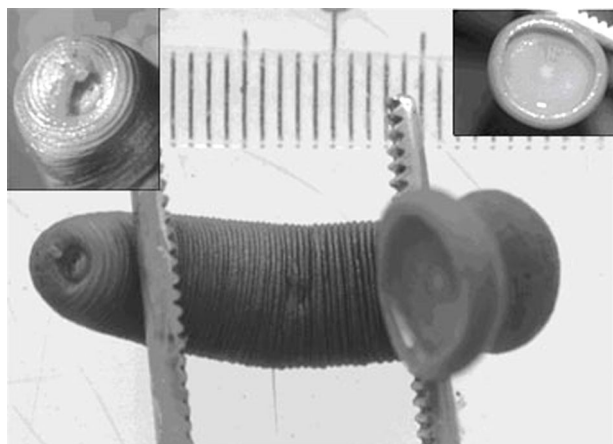


Figure 1. Leech obtained from the case

DISCUSSION

Leech infestation is reported as an important cause of bleeding and anemia especially in childhood (3, 4, 9). There are different types of leeches all over the world presenting with similar clinical aspects (2, 3, 5, 6, 9).

Cundall *et al.* (3) reported six cases of pharyngeal leech infestation (*Myxobdella africana*) from a highland area of North Kenya, three of whom were severely anaemic and one died. Estambale *et al.* (5) reported a 3-year old Kenyan child presenting with acute episodes of haematemesis and epistaxis. Although pharyngeal leech infestation is not known to be a common occurrence in the urban areas, this case of pharyngeal leech infestation (*M. africana*) had acquired in an urban environment. While investigating a case with a 4-month history of nasal obstruction and intermittent epistaxis, the cause was found to be a leech in the nasopharynx by means of endoscopic examination (2). In another case, a 50-year old Ethiopian woman with postmenopausal vaginal bleeding, speculum examination had revealed a vaginal wall leech infestation (8). Alçelik *et al.* (1) reported a Turkish child with an ocular foreign body which was identified as a leech. Thus, they concluded that ocular leech infestation should be considered in patients with a history of streams and lakes.

The leeches accidentally enter the human pharynx by drinking unfiltered water or other orificies while bathing. They attach themselves to mucous membranes having been described in sites like pharynx, larynx, conjunctiva, nose, trachea, bronchi, oesophagus, vagina and rectum. They can remain for prolonged periods causing severe anemia. Especially in the airways, they can cause even fatal bleeding or obstruction (3, 9). Removal of the leech requires special care and the utmost gentleness because it attaches strongly with its suckers. This procedure can be performed under general or topical/local anesthesia by direct laryngoscopy (11).

The leech which was taken part in this report was dark brown in colour and it had two lateral orange lines. It was measured

as 36 mm in length and 7 mm in width. It had a large grey posterior sucker which was 8 mm in diameter and small anterior sucker with three lobes. From these features and by dissection the leech was identified as *L. nilotica* (Figure 1).

L. nilotica is a circum-Mediterranean species and the genus *Limnatis* does not occur south of the Sahara Desert (7). In developing countries the possibility of Hirudinea should not be overlooked and leech infestation have to be considered in the differential diagnosis of severe anemia in children. Water-borne diseases continue to be a major cause of morbidity and mortality in developing countries at present, although leech infestation is numerically insignificant compared to the burden of other water-borne disease. The provision of adequate and clean water supplies is therefore a major priority.

REFERENCES

1. Alçelik T, Cekiç O, Totan Y, 1997. Ocular leech infestation in a child. *Am J Ophthalmol*, 127:110-112.
2. Bilgen C, Karci B, Uluoz U, 2002. A nasopharyngeal mass: leech in the nasopharynx. *Int J Pediatr Otorhinolaryngol*, 64: 73-76.
3. Cundall DB, Whitehead SM, Hechtel FOP, 1986. Severe anemia and death due to pharyngeal leech *Myxobdella africana*. *Trans R Soc Trop Med Hyg*, 80: 940-944.
4. Demiroren K, Caliskan U, 2003. Unexpected result in the etiological approaching to an anemic case: a leech. *Pediatr Hematol Oncol*, 20: 547-50.
5. Estambale BBA, Knight R, Chung R, 1992. Haematemesis and Severe anemia due to a pharyngeal leech *Myxobdella africana* in a Kenyan Child: a case report. *Trans R Soc Trop Med Hyg*, 86:458.
6. Goldsmid JM, 1977. Leech Infestation of man in Rhodesia. *Trans R Soc Trop Med Hyg*, 71:86.
7. Grosser C, Pesic V, 2006. On the diversity of Iranian leeches (Annelida: Hirudinea) *Arch Bio Sci*, Belgrade, 58: 21-24.
8. Hailemariam B, 1995. Postmenopausal vaginal bleeding due to vaginal wall leech infestation. *Ethiop Med J*, 33:183-185.
9. Kruger C, Malleyeck I, Olsen OH, 2004. Aquatic leech infestation: a rare cause severe anemia in an adolescent Tanzanian girl. *Eur J Pediatr*, 163:297-299.
10. Oski FA, Brugnore C, Nathan DG, 1998. A diagnostic approach to the anemic patient. Nathan DG, Orkin SH eds. *Nathan and Oski's Hematology of Infancy and Childhood*, Pennsylvania: W.B. Saunders Company. p.375-385.
11. Uygur K, Yasan H, Yavuz L, Dogru H, 2003. Removal of a laryngeal leech: a safe and effective method. *Am J Otolaryngol*, 24:338-340.