

Aquatic Leech Infestation: A Rare Cause of Severe Anaemia in Tropical Paediatrics

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Introduction

Anaemia is a very common clinical problem in tropical paediatrics, especially in Africa and South-East Asia, reaching a prevalence of about 50% in children under 12 years in these areas. The main reasons for this high prevalence are infections (e.g. malaria, tuberculosis, hookworm, and increasingly HIV), nutritional deficiencies (e.g. iron, folate), and inherited blood disorders (e.g. thalassaemias, sickle cell disease, G6PDH deficiency). Still, unusual, but possibly life-threatening conditions have to be considered as many of these are also treatable.

Case Report

- A previously healthy, 15 years old girl presented with a 1 week history of chest pain, coughing, intermittent haemoptysis, fever, pallor and vomiting.
- On exam, she was severely anaemic with signs of cardiorespiratory distress, and febrile.
- Hb was 4.8 g/dl, total WBC 4300/ μ l with 13% eosinophils. CXR was normal.
- She required one unit of blood.
- On the 3rd day, she vomited up a small parasite which proved to be an aquatic leech (fig. 1 and 2). Oesophagogastrosomy, then performed, revealed 4 small mucosa lesions in the pharynx and upper oesophagus. No more leeches were seen.
- Control gastroscopy after 4 days showed normal mucosa. She was then discharged on oral iron supplements.
- As the likely source of her infestation, a small lake near her village was identified although no further cases have been reported so far. The family had used the water for drinking without any precautions.



Fig. 1: An a.p. view of the leech with the oral opening on the left (length: 15 mm)



Fig. 2: A lateral view of the leech with the oral opening on the right (length: 15 mm)

Discussion

Leeches have been known for long for their ability to cause anaemia^{2-5,7}. One of the larger ones, *Limnatis nilotica*, is used even in therapeutic medicine. Terrestrial leeches can cause profound anaemia, but even more so do aquatic leeches⁷. The latter type is acquired while bathing or drinking unfiltered water. In sub-Saharan Africa, *Moxybdella africana*, *Dinobdella ferox* and *Phytobdella catenifera* are prevalent^{3,7}. They attach themselves to mucous membranes, having been described in sites like conjunctiva¹, nose⁷, mouth⁷, pharynx/larynx⁴, trachea/bronchi⁶, oesophagus⁴, vagina⁵, and bladder⁷. In the stomach, the leech is usually destroyed by gastric acid, thus it has not been described in the lower intestines. Especially in the airways, it can cause life-threatening obstruction^{6,7}, and must be removed by bronchoscopy. In all sites, marked anaemia can even lead to death³. If the leech is attached too tightly to the mucosa and resists mechanical removal, then hypertonic salt solution or cocaine can be applied which kills the leech. Then it can be removed.

Conclusion

Aquatic leech infestation certainly is a rare disease, but still, it has to be considered in the differential diagnosis in endemic areas. As removal of the leech is curative, every effort has to be made to achieve it.

Literature

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