

Case Report

# Antihistamine Therapy for Leech Bite: A Case Report

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## ABSTRACT

Leeches that attack humans are two groups: land leeches that can penetrate the skin, and aquatic leeches that can enter the body via orifices such as the mouth. In the present case, we report effective antihistamine response for a land leech bite, in a male patient who visited a leech infested area, as a tourist. While walking into a rainforest zone, a land leech attached to the dorsum of his left foot. The patient experienced itch over the site of the leech bite. He panicked and removed the leech using his fingernail. Individuals planning tourism to leech-infested areas should take preventive measures against leech bite. These preventive measures include wearing boots, leech socks, and applying skin insect repellants.

**Key Words:** Antihistamine therapy, Leech bite

## INTRODUCTION

Leech is a segmented round worm that belongs to the phylum *Annelida*, class *Hirudinea*, and family *Haemadipsidae*. It is a haematophagous organism that usually feeds on blood of mammals, including man. Leeches are found in land or aquatic environments. Aquatic leeches have a worldwide distribution. Land leeches are common in the tropics and subtropics. <sup>[1]</sup> Few species of land leeches are recognized to exist in Europe and Meso-America (the region that approximately extends from central Mexico to Guatemala, Honduras, El Salvador, Nicaragua, and northern Costa Rica). <sup>[2]</sup> Each land leech has two suckers: one at the anterior end surrounding the buccal cavity, and one at the posterior end used for attachment onto the host. The buccal cavity is equipped with three powerful jaws pointing in different directions. When a land leech bites man, an inverted Y mark inside a circle, develops onto the patient skin, and this mark is utilized for leech taxonomy identification.

Each land leech is a hermaphrodite that cross-fertilizes with another leech of the same species. The fertilized eggs are deposited in cocoons secreted by the leech glandular tissue. The life cycle development of a leech from the egg stage is direct without larval stages. In the present report, we describe a case of land leech bite which showed good response to antihistamines. We also outline the management and preventive measures against land leech bite.

## CASE REPORT

A 23-year-old male travelled to a leech infested area, as a tourist. While walking into a wet vegetation area, the patient experienced itchy sensation on the dorsum of his left foot. The skin itch was not accompanied with pain. The patient started to panic when he saw a land leech attaching to the site of the bite wound. He removed the leech (Figure 1) using his fingernail. Morphologic examination of a 400X magnified version of the image of the patient biting land leech, showed features

consistent with land leech of the genus *Haemadipsa*. Specifically, the body is segmented, has longitudinal striped brown dorsum, and two suckers one at each end were confirmed. The leech bite wound was initially cleansed using distilled water. Further cleaning of the patient leech bite wound with soap and water was made. He was prescribed oral antihistamine 2 mg tablets, 12-hourly. The skin itch stopped within two days. During follow up at one month, the patient remained free of itch symptoms.



Figure 1 – The land leech, as removed by the patient

## DISCUSSION

Leeches that bite humans are divided into two groups: land leeches with powerful jaws which can penetrate the skin, and aquatic leeches with weak jaws which can enter the body via orifices such as the mouth, eye, vagina, and nose. An aquatic leech has been reported as the aetiology of vaginal bleeding in a 10-year-old girl, who had a swim in a local water collection at a leech infested area. [3] Leech bites on different human body sites, including internal body cavities and orifices, such as the uterus, rectum, urinary bladder, vulva, nasal cavity, peritoneal cavity, nasopharynx, oropharynx, oesophagus, trachea, bronchi, have been reported in literature. [4,5] Land leech infestation is more common than aquatic leech infestation; however, its clinical outcome is usually less harmful.

In the present case, our patient did not experience pain during the land leech bite. This painless bite phenomenon has previously been reported, and is believed to be mediated through two mechanisms. [6] First, the land leech secretes a polypeptide

which blocks the host nerve-mediated pain. Second, the land leech, secretes enzymes which have anti-inflammatory properties. These enzymes include bdellin (inhibitor of acrosin), and eglin (inhibitor of alpha chymotrypsin). [7,8] The response to antihistamine therapy at oral dose of 12-hourly 2 mg tablet was good. No analgesics or antibiotics were indicated in our patient.

Panic attacks, secondary to the sight of leech attaching to human skin, is not only demonstrated in this case, but has also been reported in literature. [9] Our patient experienced heightened anxiety, and kept asking about pathogens that could be transmitted through leech bite. The potential for psychiatric implications of leech bite is big, yet often overlooked. The sight of a leech attaching to the skin of a 35-year-old woman, has taken her into a panic attack, followed by hyperventilation, chest tightness, and paranoia symptoms. [9]

## CONCLUSION

In conclusion, we report a case of good response for antihistamine therapy, to a land leech bite in a male tourist who travelled to a leech infested area. We suggest that all individuals planning tourism to leech infested areas, should take preventive measures against leech bite.

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