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Limnatis nilotica infestation in ram and kid in Dehloran city, Ilam province, west of Iran

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PEER REVIEW

ABSTRACT

Peer reviewer

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Comments

This case report is a good report to note the vet clinicians and meat inspectors. The case being performed in order to show a case of anemia and weakness caused by *L. nilotica* infestation in kid and ram which is rarely mentioned by clinicians. It is important at the ability of vet clinicians to diagnosis of anemia causes.

(Details on Page 156)

Leech infestation can cause various clinical symptoms in human and animals. There are a few reports about this infestation in the world. In this report, we represented two cases of leech infestation of *Limnatis nilotica* in domestic kid and ram with anorexia, little respiratory disorders and restlessness in Dehloran city, Ilam province, west of Iran. Based on author's knowledge, there is no report of leech infestation on ram and kid and the present case is the first report of internal hirudiniasis of ram and kid due to *Limnatis nilotica* in literature.

KEYWORDS

Leech, *Limnatis nilotica*, Iran

1. Introduction

Leeches belong to the phylum Annelida and class Hirudinea[1–3]. They are blood sucking, hermapherodic parasites that attach themselves by their suckers to vertebrate host and suck out its blood[1]. Their length varies from 5 mm to 45 cm. Leeches can be divided into two classes depending on their biological habitat: land leeches and aquatic leeches[1,2,4].

Leeches that cause parasitic pollution in humans

are land or aquatic. Land leeches include *Haemadipsa zylanic*, *Haemadipsa sylvestris*, and *Haemadipsa picta*, while aquatic leeches include *Limnatis nilotica* (*L. nilotica*), *Myxobdella africana*, *Dinobdella ferox*, *Phytobdella catenifera*, and *Teromyzon tessulatom*[5–7]. Land leeches are common in tropical areas and aquatic leeches are reported worldwide[1,2,4]. Leeches can also be subdivided into internal and external leeches, according to their potential to infest internal or on external surfaces of the host, respectively[2].

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Limnatis nilotica is an internal, aquatic leech that sticks to the mucous membrane of the pharynx, nasal cavity, nasopharynx and esophagus^[1,2]. Here we reported two different cases of *L. nilotica* infestation in ram and kid.

2. Case report

Two-year-old ram and 6-month kid were referred to the Dehloran veterinary clinic, Ilam province, west of Iran on June 2011 with anorexia, little respiratory disorders and severe restlessness with a history of drinking water from a spring.

On physical examination, a black object was seen on internal mucous membrane of upper lip in ram (Figure 1) and lower lip in kid (Figure 2). They were attached by drinking water from a leech-infested spring.



Figure 1. *L. nilotica* infestation in ram.

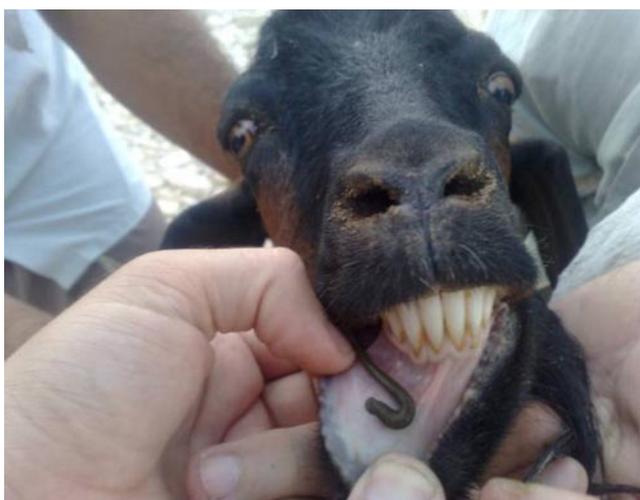


Figure 2. *L. nilotica* infestation in kid.

Black leeches were 63 mm in ram 58 mm in kid. After leeches removal, the ram and kid were comfortable under microscopic examination. Every detached leech was diagnosed as *L. nilotica*.

3. Discussion

Leeches can be useful in medicine for modern plastic surgery, drainage of periorbital and scrotal haematomas, but as parasites, they can also be dangerous and could cause problems and discomfort. Different types of leeches have been reported from different parts of human bodies^[8], but there are a few reports of different types of leeches infested animals like camel in Iraq or clinical report in a rare case of stillbirths in goat due to *L. nilotica*^[9,10]. In Iran, there are some reports of leech infested animals such as sheep, cattle, dog and donkey in Ilam province^[11,12], dog in Chahar-Mahale Bakhtiari province and cow^[13–15]. There was a case of adult ocular leech infestation that was reported by Khodabande in 2009^[16]. Ulkumen and Yilmaz have reported a case of respiratory distress and hemopytosis caused by laryngeal leech infestation in 2012^[17].

In all these cases, respiratory disorders and anemia are dominant symptoms. This report is the first one on leech infestation in kid. Leeches can suck the blood by anterior and posterior suckers. Different types of anemias depending on the duration of infestation and numbers of attached leeches can occur. They can also prevent clotting by production of a nonenzymatic secretion called hirudin^[1]. *L. nilotica* is the only species reported from clinical cases in Iran. Infested ponds, lakes and streams are the main habitat of this leech^[13]. After drinking water from the mentioned infested areas, leeches would mostly attach to the nose, nasopharynx, oropharynx, larynx and upper trachea^[13]. This infestation can be prevented by prohibiting drinking infested water by the animal owners. Therefore, the prevention and treatment of leech biting occurred in human and animals are necessary, and disinfection of water resources is an important way to prevent leech infestation^[18–26].

Conflict of interest statement

We declare that we have no conflict of interest.

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This study was conducted at collaboration with Urmia University of Medical Sciences, Urmia, Iran with Grant No. 32789.

Comments

Background

Leech infestation can cause various clinical symptoms in human and animals. Based on the biological habitat, Leeches can be divided into land leeches and aquatic leeches. *L. nilotica* is a kind of aquatic leech. There are a few reports about *L. nilotica* infestation in the world.

Related reports

There are a few reports of different types of leeches infested animals. This report as a case report has an innovation in clinicians diagnosis specially in anemic animals and in animal slaughtering and meat inspection. In Iran, there are some reports of leech infested animals such as sheep, cattle, dog and donkey in Ilam province, dog in Chahar–Mahale Bakhtiari province and cow. Khodabande has reported a case of adult ocular leech infestation in 2009. Ulkumen and Yilmaz have reported a case of respiratory distress and hemopytsis caused by laryngeal leech infestation in 2012.

Peer review

This case report is a good report to note the vet clinicians and meat inspectors. The case being performed in order to show a case of anemia and weakness caused by *L. nilotica* infestation in kid and ram which is rarely mentioned by clinicians. It is important at the ability of vet clinicians to diagnosis of anemia causes.

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