CASE REPORT

Case Report: A rare cause of vaginal bleeding at Keren Zonal Referral Hospital, Eritrea [version 1; peer review: 1 approved with reservations]

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Abstract
Vaginal bleeding due to leech infestation is a very uncommon but important gynaecological problem. This report presents the case of a 65-year-old woman who presented to Keren Regional Referral Hospital, Eritrea, with vaginal bleeding of two and half weeks duration, dizziness and fatigue. On the day of her admission complete blood cell count and speculum exam were done and she was diagnosed with anaemia due to cervical leech infestation. Routine speculum exam for vaginal bleeding is recommended in cases with history of holy water or springs visits to prevent unnecessary diagnostic tests and for rapid management.

Keywords
Leech, Vaginal bleeding, Anemia, Infestation, Case report

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**Introduction**

Leeches, which belong to the phylum Annelida and class Hirudinea, are blood-sucking parasites of most mammals, including humans. Though there are about 650 known species of leech, only a few of them are a threat to human health. People and livestock that walk close by and frequently have access to marsh areas or slow-moving streams and brooks are among the frequent victims of leech infestation. Moreover, there have been reports of climatic variation associated with leech infestation, where leeches are more frequently found in tropical and subtropical areas.

Leeches have a long slender body, 5-45mm, with an oral sucker as a mouth and caudal end for movement. Leeches bite different body sites of victims, which includes the pharynx, larynx, oesophagus, rectum, vagina, urethra and bladder, which have been reported across different publications.

When leeches become in close contact with human bodies, they tend to attach themselves to the mucosal surfaces and secrete an anticoagulant that leads to excessive bleeding from the attachment site. If it is not diagnosed as early as possible, this seemingly harmless parasite, could lead to some life threatening anemia and shock. In this paper we present a referral case of rare vaginal bleeding due to cervical leech infestation.

**Case presentation**

A 65-year-old para IV mother with no history of abortion, presented with vaginal bleeding of 17 days duration. She was referred to Keren Zonal Referral Hospital, Eritrea, from Adi-tekelezan Health Centre with a diagnosis of vaginitis.

Upon arrival, the general condition of the mother was stable. She had a fresh blood soaking her clothes. The patient reported that she was bleeding intermittently at home followed by big clots of blood. Since the start of the bleeding the patient was feeling dizzy and was becoming fatigued easily. A few days prior to admission to hospital, she was feeling an abnormal moving sensation in her abdomen. The patient stated that previous to her symptoms, she had visited Amne-Tekle Bahri, a holy water nearby, to help her alleviate headache and psychological problems.

Upon thorough examination, the patient had blood pressure of 90/40 mm Hg (normal range 90/60 mm Hg to 120/80 mm Hg), pulse rate 140 beats per minute (normal range, 60 to 100 beats per minute) and respiratory rate 33 per minute (normal range, 12 to 18 breaths per minute). She had pale conjunctiva. The perineal area was stained with blood, the cervix was closed, and the uterus was normal in size and consistency. Speculum examination revealed an actively moving worm attached to the external orifice of the cervix (a similar visual representation can be seen in Tilahun (2015) Figure 1). Complete blood count showed a haemoglobin level of 4.6g/dl (normal range, 12 g/dL to 16.0 g/dL) and platelet count of 110,000 cells/microliter (normal range, 150 × 10^3 μL to 400 × 10^3 μL). Abdominal ultrasound finding was normal.

The patient was transfused with two units of blood immediately and the bleeding site was gently washed with saline and a bit of alcohol to facilitate the detachment of the leech. With a lot of care, the leech was removed gently using sterile forceps. After stabilising the vital signs (respiratory rate 17 breaths per minute, blood pressure 110/80 mm Hg, pulse rate 80 beats per minute), the patient was sent home after four days with iron tablets and with advice to take a good preventive measures if she had ever to go to the holy water again. She was also informed to bring the accompanying family members who went with her if they showed any unusual symptoms. Pre-discharge complete blood cell count showed an increased Hg level of 8g/dl and platelet count of 120,000 cells/microliter. The patient was asked to come back after two weeks for follow-up.

**Discussion**

Vaginal bleeding due to leech infestation is a very uncommon complaint in women visiting gynaecological and obstetrics departments. Vaginal bleeding due to worm infestation could usually be missed if thorough investigations and physical examination are not done accordingly. A speculum exam should be done to see the source of bleeding and possible leeches before entertaining other differential diagnosis, especially if a patient reports visiting water bodies. Great care should be taken in removing the worm from its attachment. It should not be forcefully removed as the jaws of the worm might remain at the bite site which might cause additional bleeding or lead to later malignancies. Preventive measures such as self-checking after washing in ponds and waterfalls are necessary to minimize infestation and instructions should be given as part of routine health education. An awareness program should be initiated to inform clinicians working in clinics near such sources of water.

**Consent**

Written informed consent for the publication of the case report was obtained from the patient.

**Data availability**

No data is associated with this article.

**Grant information**

The author(s) declared that no grants were involved in supporting this work.

**Author information**

MA was responsible for the gynaecological management of the patient while based at Keren Zonal Referral Hospital in 2012. SS was the nurse collaborating on this case while based at Halibet Hospital.
References


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Abstract
- Line 5 ‘complete blood cell count’ write as ‘complete blood count’.

Case presentation
1. Good to replace the word ‘mother’ with ‘patient’.

2. Line 2 ‘17 days duration’ write as ‘17 days’.

3. ‘a bit of alcohol to facilitate the detachment of the leech’. It is clear that alcohol is an irritant to the vagina. How did you use it? Is that contraindicated in the vagina? This needs explanation.

4. This patient was appointed for follow up but what happened then?

5. The authors must include a picture of the leech.

Discussion
- ‘Great care should be taken in removing the worm from its attachment’. What does great care mean? Rather it is good if you recommend other techniques.

Is the background of the case's history and progression described in sufficient detail?
Yes

Are enough details provided of any physical examination and diagnostic tests, treatment given and outcomes?
Yes

Is sufficient discussion included of the importance of the findings and their relevance to future understanding of disease processes, diagnosis or treatment?
Partly
Is the case presented with sufficient detail to be useful for other practitioners?
Yes

**Competing Interests:** No competing interests were disclosed.

**Reviewer Expertise:** Gynecology

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

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