

## Case report

**Medico-Legal Issues of a Leech Bite in a Premenarcheal Child**Konara Mudiyansele Tikiri Bandara Gunathilake<sup>1</sup>, Muditha Vidanapathirana<sup>2</sup>✉<sup>1</sup>Provincial General Hospital, Ratnapura, Sri Lanka.<sup>2</sup>Department of Forensic Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka**Introduction**

Vaginal bleeding after first week of life, but before menarche, is always abnormal and needs diagnostic evaluation. This may be the first evidence of sexual abuse. False allegations and suspicion among guardians may lead to serious consequences on the child as well as the suspects.

**Case history**

An eight month old baby living in a rubber estate was presented with sudden onset vaginal bleeding for two days. Bleeding disorders were excluded and the child was referred to a Judicial Medical Officer (JMO) to exclude sexual abuse. Medico-legal examination done on the third day after the incident revealed 1.2cm x 1cm bleb of hemorrhage on labia minora. An isolated underlying 0.5cm abrasion appeared to cause active bleeding. There was no past history of similar episodes. Grandmother named a few suspects and alleged sexual abuse. Later, mother mentioned that a leech was found in the room a few hours after the incident.

**Conclusions**

Unusual vaginal bleeding in children should be investigated thoroughly to achieve justice, exclude false allegations and protect children and guardians from stigma. Forensic pathologists must be aware of fauna of their working area because they could cause medico-legally significant injuries.

**Key words:** Leech bite, Unusual vaginal bleeding, Itchy lesions**Copyright:** © 2016 Gunathilake KMTB *et al.* This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.**Funding:** None**Competing interest:** None**Received:** 21 January 2016**Accepted revised version:** 03 July 2016**Published:** 01 September 2016

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### Introduction

Unusual bleeding from genitalia of a child should be considered serious because this may be the first evidence of sexual abuse. False allegations and suspicion among guardians may lead to serious consequences on the child as well as the suspects.

Vaginal bleeding after the first week of life, but before menarche, is always abnormal and needs diagnostic evaluation (1). Accidental trauma, bleeding disorders, sexual abuse are some of the leading causes in the list. Therefore, it is very important to evaluate and differentiate accidental trauma and sexual abuse.

### Case presentation

An eight month old baby living in a rubber estate in the wet zone was presented with sudden onset vaginal bleeding for two days. The child was immediately taken to the nearest hospital and was transferred to a tertiary care unit. There, the bleeding disorders were excluded and the child was referred to a Judicial Medical Officer (JMO) to exclude sexual abuse. Medico-legal examination done on the third day after the incident revealed 1.2cm x 1cm bleb of hemorrhage on labia minora. An underlying isolated 0.5cm abrasion appeared to cause active bleeding.



Figure 1 **Bleb of haemorrhage on the labia**

There was no past history of similar episodes. The baby's grandmother named a few suspects and alleged sexual abuse. Later, the mother mentioned that a leech was found in the room a few hours after the incident. There was no family history of bleeding disorders.

### Discussion

Leeches are bloodsucking creatures found in land, freshwater and marine environments (2). Land and

aquatic leeches which vary considerably in size belong to phylum Annelida and class Hirudinea. (3) In Sri Lanka, land leeches are mostly found in the wet zone. Reports of vaginal leech bites are rare in Sri Lanka with only one published report by Karunaratne *et al* (2015) where a ten year old girl was affected following a swim in a local stream (4). Ibrahim *et al* (2002) reported a similar case from Malaysia (5). However, vaginal leech bites in children are commonly reported from the rural parts of north-eastern India (6). Further, an intra-peritoneal leech, which entered through vagina and uterus with visceral perforation in a 2-year-old girl has been reported and the child presented with intra-peritoneal hemorrhage and shock (6).

In leech bites, dilated veins and punctured skin with bleeding are seen (2). But in this case, finding only an abrasion could have been due to the performance of the medico-legal examination on the third day.

Prolonged bleeding from leech bites are due to hirudin (a potent antithrombin), histamine like vasodilators, hyaluronidase, and calin (a platelet aggregation inhibitor) (7) and cause medical as well as medicolegal implications. Most literature reveal complications due to bleeding or obstruction of the viscera (8), but no literature is available on medico-legal issues due to leeches.

In this case, the most important medico-legal issue was the differentiation of abuse from natural causes including leech bites. Factors usually considered to determine sexual abuse include history given by the child, eye witnesses, mechanism of injuries and scene investigations.

Direct diagnosis of a leech bite was difficult in this case because the leech was not found attached to the site and eye witnesses were absent. There was only one isolated injury found on the labia minora but no surrounding or associated injuries to suggest trauma. Further, the first complaint was made during sleep. All these indicated that the lesion was more towards other causes than trauma.

Further, physicians should keep leech bites in mind when treating patients with itchy lesions, (9), but in this case, this particular fact had not been elicited by the clinicians. However, it may be difficult to elicit itchy lesions in an eight month old baby. In leech bites, sustained bleeding may persist as long as seven days (2). Normal clotting profiles in the body with continuous bleeding from the site of injury indicated that the bleeding was due to a local rather than a generalized cause. Living in a leech common area and the presence of a leech at the scene further suggested a leech bite.

Therefore, forensic pathologists working in these areas should always keep leech bites in mind when unusual vaginal bleeding occurs and refrain from creating unnecessary issues such as false allegations and stigma to children and suspects.

The referral to a tertiary care hospital by the local hospital in vaginal bleeding to exclude sexual abuse should be commended. Further, the counselling of parents and guardians when indicated is important.

**Conclusions**

Unusual vaginal bleeding in children should be investigated thoroughly to achieve justice, to exclude false allegations and to protect children and guardians from stigma. Arrangement of counselling for parents and guardians in appropriate circumstances is reiterated. Forensic pathologists must be aware of fauna of their working area because they could cause medico-legally significant injuries.

**Consent**

Informed written consent was obtained from the patient for publication of this case report and images. A copy of the written consent is available for perusal by the Editor-in-Chief of this journal.

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