Haemlacria: A mini case series of a rare condition

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ABSTRACT

Haemlacria is a rare condition which is not widely mentioned in literature. In this mini case series, we describe two cases with this presentation. Both the patients were women with unilateral presentation of haemlacria in the right eye. Case one was diagnosed with photosensitivity, while case two was assumed to be due to an undiagnosed systemic illness which led to her mortality. Careful history, systemic examination, slit-lamp biomicroscopy, fundus examination, relevant haematological tests like coagulation profile, liver function test along with nasolacrimal duct probing with syringing and appropriate imaging may be needed to arrive at a diagnosis. Though many cases are idiopathic yet this can be a sign of an underlying life-threatening disease.

Keywords: Bloody tears, haemlacria, photosensitivity

Introduction

Haemlacria (bloody tears) is a rare condition in which a person produces tears tinged with blood. Though a blood-stained discharge is not uncommon in conditions like acute conjunctival hyperemia and inflammation, occurrence of bleeding from conjunctiva as an isolated phenomenon is rare.[1] Haemlacria has a wide range of possible aetiological factors; however, reports suggest that many cases are idiopathic, self-limiting and spontaneous resolution is seen in most cases.[2] We report two cases that presented with haemlacria to us. The first was diagnosed with photosensitivity, while the second case had an undiagnosed underlying systemic illness that proved fatal before a final diagnosis could be reached. Literature search did not show any similar case reports. Through this mini case series, we seek to emphasize that a case of haemlacria should be thoroughly investigated and may require multidisciplinary approach as this can also be a sign of an underlying life-threatening disease. As haemlacria can have multiple aetiologies that include systemic illnesses, there is a high probability that they may present to the primary care physician first, and hence, it’s important that every medical professional needs to be aware of this rare condition.

Case Summary

Case 1

A 24-year-old woman came with complaint of bloody tears from right eye (RE) for 1 year. There was no significant medical, gynaecological or drug history. The patient revealed that the RE lid margin and surrounding skin changed colour on exposure to sunlight and was not associated with itching. Her uncorrected visual acuity was 20/20 in both eyes. Slit-lamp biomicroscopic examination of the anterior segment revealed progressive dilatation of blood vessels resulting in redness of the RE
lower lid margin and the adjacent periocular skin (30 seconds) followed by the upper lid margin and the surrounding periocular region (43 seconds). Its intensity increased with time and exposure to full diffuse illumination, culminating in oozing of blood from the inner canthus (57 seconds) and dilatation of blood vessels with streaking in lower eyelid (66 seconds) [Figure 1a-g]. There was no associated oedema and swelling. Upon discontinuation of slit lamp illumination, the discoloration in the eyelid region faded in approximately 2 minutes. The left eye (LE) showed no similar change on exposure to illumination [Figure 1h]. Systemic examination showed no sign of any underlying disease. Laboratory investigations included a complete hemogram, bleeding time, clotting time, prothrombin time, liver function tests and bleeding profile, which were in normal limits. Platelet count, capillary fragility test and urine analysis were also within normal range. Markers for autoimmune disorders like systemic lupus erythematosus (SLE) were negative. The patient was diagnosed with photosensitivity and treated by a dermatologist. She was advised to avoid sun exposure and wear sun protective glasses along with sunscreen skin lotions.

**Case 2**

A 24-year-old woman presented with complaint of bleeding from RE of recent onset. Medical history revealed treatment for “pain abdomen”. However, medical records were not available. On ocular examination, her visual acuity was found to be 20/20. BE. Slit-lamp biomicroscopy showed blood oozing from the fornices of RE from no apparent lesion [Figure 2a inset]. Palpebral conjunctiva showed petechial haemorrhages [Figure 2a]. RE fundus examination revealed a single flame-shaped haemorrhage inferonasal to the optic disc [Figure 2b]. Both eye anterior segment structures were within normal limits. Intraocular pressure was 12 mmHg in both eyes. Tests to rule out coagulopathy and liver function tests were advised and the patient immediately referred to internal medicine for further evaluation. The patient died within a week probably due to the underlying systemic illness and its complications. Reports of investigations, imaging and a conclusive diagnosis were not available to us.

### Discussion

Haemlacria is usually unilateral and self-limiting. Important causes are lacerations, inflammations and infections of the conjunctiva, eyelids, or nasolacrimal system. Other causes include capillary haemangioma, conjunctival telangiectasia, retrograde epistaxis and nasal and paranasal neoplasms.[2] Literature review revealed many case reports with undetermined source of haemlacria[3,4] and a female preponderance.[5-8] A few patients with undetermined source of haemlacria have been diagnosed with Munchhausen syndrome,[9] whereas nasolacrimal endometriosis has been implicated in a few studies.[5,6] Ottavay et al. in a series of 125 healthy subjects found positive test for the occult occurrence of blood in tears in 18% of fertile women examined, mostly during the menstrual phase.[7]

In our mini case series, photosensitivity was implicated in the first case while an undiagnosed underlying systemic condition as the cause in the second case. Photosensitivity is a cutaneous overreaction to ultraviolet rays from the sun. It may be idiopathic or occur after exposure to certain toxins, chemicals or as a side effect of medication. Patients with photosensitivity should be examined for systemic or cutaneous disorders associated with light sensitivity such as systemic lupus erythematosus (SLE), dermatomyositis, porphyria, solar urticaria, rosacea and xeroderma pigmentosum, respectively.[9] However, our patient didn’t have similar cutaneous reaction elsewhere. Additionally, systemic evaluation and investigation did not reveal any underlying condition. The diagnosis was primarily clinical. The literature search did not reveal photosensitivity as a reported cause of haemlacria.

In our second case, haemlacria was probably due to an underlying systemic condition, which remained undiagnosed and proved fatal. We couldn’t access her haematological and imaging reports. However, we considered it necessary to include this case in our mini case series to underscore that haemlacria can be an important sign of an underlying life-threatening condition, though most reports suggest that it is essentially a benign and self-limiting condition. Hemophilia, thrombocytopenic

![Figure 1: Case 1. (a-c) Right eye showed sequential hyperaemia of lower and upper eyelid, periocular area and blood at medial canthus in (arrowhead). (d-e), Telangiectatic vessels (16 x magnification). (f) Dilated vessel (arrowhead), (g) Blood streak (arrowhead). (h) Left eye normal](image-url)
purpura, deficiency of clotting factors, including factor VII are some hematologic diseases causing increased bleeding diathesis that may lead to haemorrhages at multiple organs, including haemolacria. Vascular disorders like hypertension can occasionally lead to retrograde haemorrhage via the lacrimal puncta. Other causes mentioned in literature include Hereditary haemorrhagic telangiectasia, Osler Weber Rendu disease, and Henoch-Schönlein purpura. The literature search did not show any reports of haemolacria followed by mortality as in our case.

The patients suffering from haemolacria may first consult a family physician and primary care provider. An ophthalmology consultation to rule out ocular causes along with a multidisciplinary approach may be required to arrive at a diagnosis to explain it as a rare condition. The treatment options and outcomes of patients with haemolacria depends on the primary condition, a few of which might be life threatening.

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**Conflicts of interest**
There are no conflicts of interest.

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