

HAEMOLACRIA A RARE CONDITION

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ABSTRACT

Haemolacria refers to "bloody tears. A disorder known as hemolacria is characterized by bleeding in the eyes. Other names for the disorder include haemato-dacryorrhea, sanguineous lacrimation, and dacryohemorrhia. Bloody tears, or hemolacria, are an uncommon occurrence with a variety of causes. It has been connected to diseases including backward epistaxis, lacrimal sac tumours, and bacterial conjunctivitis. It can be unilateral or bilateral. It may manifest as a symptom of a dissociative condition or be unexplained. People who have haemolacria, an uncommon illness, bleed from their eyes. In 1581, Dodanaeus was the first to describe this illness after observing it in a 16-year-old girl who was not menstruation. Typically, heemolacria is self-limiting, unilateral, and benign. Its aetiologies are diverse. Infections, cuts, or inflammations of the nasolacrimal system, eyelids, or conjunctiva are the most frequent. Henoch-Schonlein Purpura, congenital hemorrhage telangiectasia, trauma, malignancies of the lacrimal sac or paranasal sinus cavities, arterial abnormalities, seizures with backward flow, and inherited or acquired bleeding disorders or coagulopathies are some more reasons. There is a lack of study on haemolacria, and because of its different causes and manifestations, it might be challenging to reach the right conclusion even after doing several examinations. The primary condition determines the options for therapy and results for individuals with hemorrhage, some of which may be fatal. This illness is managed in a variety of ways, with the main goal being to address the root cause of the problem.

KEYWORDS: Haemolacria, Bloody tears, Idiopathic haemolacria, Haemolacria treatment.

INTRODUCTION

Haemolacria is a disorder that occurs when the patient produces bloody tears instead of common watery tears.^[1] A collection of conditions known as hemolacria cause the production of tears that are partially made of blood. Both unilateral and bilateral are possible. The etiology consists of sporadic, medication, psychological, comprehensive, and visual.^[2] Hemolacria, or the occurrence of blood in tears, is a rare illness with few occurrences documented in the literature. This symptom is connected with a number of underlying disorders, but its frequency and etiology are unknown.^[3] It is a rare condition, with only a few examples described earlier. Because of its rarity and scant research on the disorder, the prevalence and predisposition of hemolacria for a certain gender, race, or age remain unknown. Hemolacria can be one of the most concerning signs in eye disease, with various underlying causes and illnesses. Aetius of Amida's scholarly medical work from the sixth century was the first to describe hemolacria. A thousand years later, in the 16th century, there is a story of a woman who had auricular and eye bleeding each month rather than menstruating.^[4]

In 1581, Dodonaeus described a 16-year-old girl who had bleeding tears instead of monthly menstruation. Bleeding can originate from the the cornea (Trauma, laceration, inflammatory processes, vascular lesion, or foreign body) or be caused by a variety of systemic diseases, including haemophilia (Clotting factor 8 deficiency), inherited bleeding. telangiectasia (also known as Osler-Weber-Rendu disease), Henoch-Schoenlein purpura, or Gardner-Diamond syndrome. Other possible sites of bleeding include the lid edge, lacrimal puncta, and orbits. To diagnose and subsequently treat such individuals, detailed information on their medical background and medical history are essential.^[4] Bloody tears, also known as haemolacria, are an incomprehensible and distressing illness for physicians, patients, and guardians. Haemolacria refers to "bloody tears," referring to either open blood or bleeding-mixed secretion of both or one of the eyes. In research, this illness has been recorded by patients from several medical disciplines. Haemolacria can be linked back to the medieval 'stigmatists' of the Catholic faith, who experienced bleeding from several wound sites (locations correlating to Jesus Christ's crucifixion wounds). Stigmata can take several forms, include bleeding cries. In the eye, sanguineous flow is a common observation in severe corneal anaemia and inflammation, although bleeding from the eyes in isolation is infrequent and uncommon. Various writers outline numerous reasons, including conjunctiva vascular haemangioma, conjunctive the condition, lacrimal sac tumours, and trauma.^[5] Hemolacria is

a harmless and self-limiting illness, however significant systemic connections may emerge. Because of the scarcity of resources and information on this rare disease, doctors treating emergencies should be familiar with it. Parents and patients must be properly counselled in order to provide effective support for dealing with the condition. Additionally, periodic monitoring and follow-ups are required, with referral to specialists like as eye doctors.^[4]

Idiopathic haemolacria

Idiopathic haemolacria is a rare diagnosis in the medical field; it is considered excluding. Before being classified as idiopathic, it must undergo a complete medical, scans, and lab review. After analysing the research, potential causes of haemolacria include trauma, vascular tumours of the eye appear, lacrimal system illness, reverse epistaxis, haemorrhage, ovarian cysts psychotic reasons, and drugs.^[6] Idiopathic haemolacria is the exclusionary condition. A thorough the past, clinical inspection, haematological, biochemical, and radiology studies are needed to diagnose idiopathic haemolacria.^[7]

Mechanism of bloody tears

Bloody tears can be caused by bleeding in the lacrimal puncta. The lacrimal puncta serves to discharge tears from the nasal cavity. When the stress in the passageways of the nose rises, drainage might be expelled by the puncta. This increasing nose strain can be caused by nose straining after an epistaxis episode. As a result, it helps to a downward flow via the lacrimal puncta. The Valsalva technique may also cause increased nasal pressure. The Valsalva manoeuvre may change blood flow patterns throughout the body, causing small veins within the eyes to rupture, resulting in haemolacria.^[8]

Diagnosis

There is a lack of research on haemolacria, and due to its diverse etiologist and demonstrations, it can be hard to make an accurate diagnosis even after conducting numerous investigations.^[9] For diagnosis, a precise memory and an overall physical, particularly an eye inspection, performed by an ophthalmologist are required. The initial investigation should include comprehensive laboratory tests for coagulation, kidney and liver profiles, and factor deficits (VIII and the von Willebrand factor antigen assays). A regurgitation test is indicated to rule out blockades since blood reflux may indicate the existence of a lacrimal gland tumour, as can a capillary fragility test. Imaging investigations, such as a computed tomography (CT) scan or a magnetic resonance imaging (MRI) of the orbital and head, may be used in recurring cases to rule out tumours or a spinal varix. If a lacrimal duct mass or

corneal lesion is seen, a biopsy is recommended. The subjacent cause determines how hemolacria is treated. The majority of hemolacria instances are minor and resolve without consequences once the triggering event has been identified and managed.^[3] Although haemolacria has been identified in various research as a sign of 'Hysteria' and other 'Psychological' diseases. This indicator has not been definitively linked to any specific psychiatric illness.^[5]

Causes of haemolacria

The origins of bleeding in haemolacria can be teardrop glandular systems, lacrimal basins walls, or puncta lacrimation.^[10]

- Hemolacria has been documented in all gender categories, and in most situations, it presents unilaterally, which may not refute a systemic reason for this sign^[1-3]. The diverse reasons of hemolacria can be categorized into local and systemic ones.
- Retrograde epistaxis is commonly produced by sealing the nasal passages or pinching in patients with congenital lack or insufficiency of nostril valves.
- Local reasons for hemolacria may include eye illness or disease, such as pyogenic granuloma, a severely circumscribed malignancy on the cornea or lacrimal sac. Diathermy is recommended for its removal.
- Consider vascular malformations (e.g., venous vessels and bleeding carcinomas), foreign bodies, or lacrimal tumours, such as haemangiomas and melanomas.
- Hemolacria may occur following head and facial surgery or trauma, including frontal and retinal injuries, nose skeletal broken bones, and Le Fort injuries.^[3]
- Haemolacria can be caused by trauma, tumours of the nasal sinuses or lacrimal sac, vascular abnormalities, genetic hemorrhagic telangiectasia, Henoch-Schoenlein Purpura, seizures with backward flow, and dissociative conditions.
- According to one study, women have haemolacria more frequently throughout the initial week of their periods, which may be related to hormones.
- In another instance, unexplained hypertension-related epistaxis was associated with haemorrhage, which was believed to be caused by retrograde flow via the nasolacrimal duct.^[11]
- This periods, stress, anxiety, trauma, and exercising, such as flexing, wheezing, and bowing, are further causes of haemorrhage. There have been reports of haemolacria caused by medications such as cholinergic and silver nitrate.^[10]

- Severe anticoagulant therapy, persistent kidney disease, and elevated blood pressure could all contribute to haemorrhage.^[12]
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Associated illness

The symptoms lasted anywhere from one day to five years. Migraines, epilepsy, haematidrosis, yellow eye departure, jerking of the parts of the body, blood in the spittle, low-quality fever, and diarrhoea were among those related diseases.

The most frequent correlation was between migraine and epistaxis that patients had haematidrosis, or bloody sweat, which was typically linked to psychological stress and indicated a more complicated, long-lasting course of the illness.^[13]

Clinical Examination and Investigations

- Radiographic and laboratory investigations: The following parameter like liver function test, urine dipstick, urine culture, von Willebrand factor (vWF) antigen assay and factor VIII levels, bleeding time, clotting time, prothrombin time, coagulation profile, and completed blood count are tested.^[4]
- Additionally, brain computed tomography (CT) scans.^[4]
- Slit-lamp analysis.^[4]
- Regurgitation test.^[13]
- Ophthalmologic examination of both eyes.^[13]
- Nasendoscopy.^[11]

Treatment for haemolacria

In order to diagnose haemolacria as an uncommon illness, individuals may firstly see a primary healthcare provider and general doctor. A team effort and an eye consultation may be necessary to rule out visual causes. The primary condition determines the options for therapy and results for individuals with haemorrhage, some of which may be fatal.^[14] The underlying reason determines how hemolacria is treated. Once the triggering factor has been identified and managed, the majority of hemolacria cases are minor and proceed without any consequences.^[3]

- This illness is managed in a variety of ways, with the main goal being to address the root cause of the problem. Local or systemic antibacterial agents, bleeding disorder correction,

anti-inflammatory medications, or removal of lesions like masses or granulomas are some possible forms of therapy.^[13]

- Bloody tears can be upsetting to individuals, parents or caregivers therefore emotional support can also be provided to assist them deal with this distressing situation.^[13]
- To begin treating this illness, the actual index ailment must be ruled out. The evaluation of exclusion is idiopathic haemolacria. So, detailed the past, clinical tests, haematological, metabolic and radiographic studies are needed to diagnose as unexplained haemolacria.^[15]
- Treatment is determined by the cause and may involve hormonal therapy, antituberculosis drugs, antithyroid medications, psychotherapy, correction of a haemorrhage diathesis, or antibiotic.^[7]
- It has also suggested that large doses of vitamin C can help with bloody tears brought on by long-term inflammation diseases.^[7]
- Haemolacria has been successfully treated with beta blockers.^[7]

CONCLUSION

As hemolacria is a harmless illness that resolves on its own, there may be significant systemic connections. Because there aren't many resources or studies on this uncommon illness, doctors treating emergencies should be aware of it. Effective management of the disease requires appropriate counselling for families and individuals affected, as well as periodic surveillance and follow-ups and referrals to specialists, especially eye experts. In research, various rare incidences of haemorrhage are documented. From infants to the elderly people all age groups may be impacted, which is naturally connected to the underlying causes. With an average sex ratio of 13:3, females are more frequently impacted than males. In a 2:1 ratio, bilateral engagement is typically more than unilateral involvement. It could last anywhere from a day to five years. In most situations, the ailment resolves on its own and is self-limiting. Regular follow-up is crucial for individuals whose etiology is uncertain in order to ensure that no occults are missed. Patients who report of bloody tears must have thorough ocular and ENT tests as well as a systemic investigation of the etiological causes. Patients may be suspected of idiopathic haemolacria and must be examined on a regular basis if the aetiology of the condition cannot be determined by medical evaluation and tests.

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